

SANAD Housing Finance Study

Housing Finance in the Middle East and North Africa

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1. Introduction

This study has been conducted with the objective of identifying housing finance and technical assistance options for the SANAD Fund. SANAD Fund is a Luxembourg-based impact investor in MSME and housing finance in the Middle East and North Africa.¹ Since its inception in 2011, SANAD's mission has been to enhance financial access for micro, small and medium sized enterprises ('MSMEs') in the MENA region in order to support economic development and job creation. SANAD Fund is set to expand its mission by also including the provision of housing given this is an increasingly important topic in MENA: countries such as Lebanon and Jordan are having to accommodate an increasing number of refugees and most countries in the region are experiencing high rates of urbanization and have a young, growing population that further fuels demand for affordable housing.

Against this background, SANAD's Technical Assistance Facility (SANAD TAF) commissioned a study to provide a comprehensive picture of the demand- and supply-side of the housing finance sector, including key developments, challenges and housing financing needs. The study focuses in detail on the following aspects in the SANAD target region:

- Unmet demand by low- and middle-income households for adequate housing finance
- Reasons for limited supply of housing finance to low- and middle-income households by financial institutions
- Current or planned initiatives to address the shortage of affordable housing
- Types of refinancing instruments typically requested by financial institutions that offer housing finance
- TA needs of (potential) partner institutions ('PIs'), meso-level players and end-clients in the area of housing finance
- Increased migration and refugee movements in certain MENA countries and their effect on the overall housing/shelter situation in those countries

As agreed with the manager of the fund, Finance in Motion GmbH² – a Frankfurt-based asset manager – the focus of the study was on Morocco, Tunisia, Egypt, Palestine, Jordan and Lebanon. Out of the six countries and after a first-country desk research, Morocco, Egypt and Lebanon were selected for a more in-depth analysis.

The following key findings can be highlighted:

Growth in population and households is the lead driver in housing finance demand

- **Palestine, Egypt and Jordan** have the fastest growing populations in the region, as well as the highest increase in the number of households, hence the **highest demand for housing finance**
- According to Dübel and Hassler (2016), **Palestine and Jordan would have to double their housing stock** in order to reach the same housing supply per person as the European average of 2-3 people

¹ www.sanad.lu

² www.finance-in-motion.com

- The **numbers in the study exclude refugees**, thus, **particularly in host countries, such as Lebanon and Jordan, the actual demand for housing is much larger**. Additionally, it should be noted that the average refugee stays in the country of refuge for up to 17 years³

Almost 700K housing units are needed per annum to match demand over the next 35 years

- The **largest deficit of housing supply is found in Palestine, Egypt and Jordan** where the deficit is calculated as percentage of available housing stock
- Over the next 35 years, from 2015 to 2050, **Egypt will have the largest housing need with an estimated half a million housing units necessary to meet the forecasted housing demand**; Morocco is a distant second with 75K units, followed by Palestine and Jordan with a little over 30K units for each
- In relative terms, as indicated by the 35 CAGR of housing needs, **the largest growth is found in Palestine with a CAGR of 2.8%** followed by Egypt at 1.9% and Jordan at 1.7%

Morocco and Lebanon are the largest mortgage markets in the region; peers lag

- Mortgage lending as % of GDP is the most developed in Lebanon (22%) and Morocco (19%) and still at underdeveloped in Palestine (2.6%) and Egypt (<1%)
- **Commercial banks currently dominate the housing finance market in the focus countries**, at the expense of mortgage companies, which are restricted by the lack of regulatory frameworks in most countries, and their focus on high value, low volume properties that cater to the upper end of the housing market
- In turn, **non-mortgage housing lending**, i.e. instalment financing from developers, or home improvement loans from MFIs, **play an important role for housing finance in the region**
- Overall, the broad housing finance market is expected to grow across all surveyed countries
- Currently, **key constraints for mortgage finance in the region are the short maturities and the unstable interest rate environment**, which makes long term housing finance risky for both consumer and provider.

Access to data and literature review

The authors emphasize the difficulties of obtaining the empirical information needed to undertake calibrations regarding current and future demand for, and even current supply of, housing finance. Public statistics and housing market analysis is deficient to a varying degree throughout the all focus countries.

In three of the six countries – Palestine, Jordan and Lebanon – the housing finance system has been hardly researched in recent years and what research has been commissioned has often focused on specific housing market issues such as access to land or the refugee situation.⁴ The annual surveying of

³ www.sanad.lu

⁴ An overview over country-specific work performed is provided by Hofinet, an information platform on global housing finance organized by Wharton School professor Marja Hoek-Smit. <http://hofinet.org/>

the Centre for Affordable Housing Finance in Africa provides introductory analysis for the remaining three North African countries.⁵

In a fully regionally comparative fashion, housing finance has been most recently covered by the 2011 World Bank Financial Sector Flagship Report for MENA, with a general strategy focus.⁶ The last detailed private sector housing finance study covering the regions markets was conducted by Merrill Lynch and is now almost a decade old.⁷ As the expectation of a fast development of mortgage capital markets has waned for large parts of the region, the field seems to be left to the public sector with their more limited resources for financing comparative analysis.

The authors therefore do not aim at substituting for the full market, product and institutional analysis that was provided by Merrill Lynch at the time. Rather an updated enhanced snapshot is being provided within the means of the project. The material is organized into two main sections, on housing finance demand – composing an analysis of housing needs, current housing investment, borrower bankability and unmet demand – and on housing finance supply covering both mortgage and non-mortgage finance product offers. Brief policy conclusions are offered for this publication version.

⁵ Ramparsad (ed) (2015).

⁶ Rocha (ed) (2011).

⁷ Batchvarov et. al. (2007).

2. Housing Finance Demand

What type and amount of financing is requested by the low- and middle-income segment for what type of housing purposes?

Household effective demand is a concept that combines household needs and their budgets, i.e. household income and available finance to households. Finance permits households to smooth the share of their income spent on housing investment over time. We thus structure the discussion into two parts:

- The first subsection deals with housing needs derived from population, household formation, spatial and quality aspects of housing and their trends;
- The second subsection reviews realized demand in terms of actual construction and home improvement activity, analyzes the gap and reviews the types of finance that could close the gap.

2.1. Housing Needs

Updated comparative housing demand analysis covering the six focus countries is absent. What is available are UN population surveys and forecasts, which are globally coordinated, and occasional survey-based housing data and estimates. Also, while local statistical offices have attempted to do housing-needs projections (e.g. for Palestine), these in-house work programs are fraught with methodological issues and are not comparable across countries. The authors therefore undertook some own-data analysis in this section in order to arrive at reasonably comparable calibrations.

The needs calibration may be broken down again into three quantitative components: (i) needs arising from population and household formation, (ii) dynamics from spatial mismatches (migration/internally displaced/refugees), and (iii) from quality deficits such as obsolete and substandard housing units, i.e. in economic terms, depreciation. For an analogous historic analysis for the Middle East the reader is referred to Donthé et. al. (2000). The frequently encountered housing deficit estimates for individual countries are an amalgam of the three main components.

2.1.1. Population and Household Growth Dynamics

Global population growth. The Middle East and North Africa (MENA) region has one the fastest growing populations in the world. Table 1 shows the 2015 and 2050 UN population survey estimates for the focus countries. Particularly dynamic are the UN's population growth expectations for Palestine, Egypt and Jordan. The Lebanese, and to a lesser extent the Jordanian dynamics, depend on the degree of potential integration of Syrian and other refugee populations.

Population statistics in the Middle East are political and are therefore hard to synchronize and analyze. The Lebanese and Jordanian UN numbers and projections include Palestinian refugees to a varying degree and generally exclude the current wave of Syrian refugees. Census results are often unreliable,

and even more so are estimates and projections. Considerable statistical discrepancies between sources – and sometimes within the same source – are the result.⁸

Household size and formation. Table 1 reports available average household size data derived from census results and census extrapolations.⁹ The range between 4 and almost 6 persons per household that we observe is an important general housing deficit indicator per se. For comparison, Europe’s average household size data range is between under 2 and 3 persons by country. Even though adjustments need to be made for general family size differences and cultural factors, the indicator suggests considerable stress in the Middle Eastern housing markets. This takes the form of nuclear families being forced to cohabit with each other (i.e. with the families of their parents and/or their children), or general overcrowding. Palestine and Jordan, for instance, would have to double their housing stock to reach the same average household size as the European average.

Our computations assume a rather modest decline of average household size by 30% until 2050, uniform across the focus countries. The scale and speed of the release of this potential into market reality will depend on numerous housing and housing finance market factors, such as income / affordability levels and supply dynamics, i.e. will be endogenous to the specific country situation and thus differ. Urbanization can also slow down household formation as a result of higher land and house prices.

Specifically, even the rather modest assumption of a 30% reduction over 35 years may be optimistic for Jordan and Palestine, which have not seen any change in household size over the past decades. Morocco and Tunisia, in contrast, have seen greater expansion of their housing supply and might see a faster reduction going forward, towards European levels.

First-time buyer age group. Another angle permitting the assessment of future quantitative housing needs is the dynamics of younger age groups at the threshold of first-time buyer age. This can be approximated by the population age group of 15-25 years whose future expected size can be readily

Table 1: Population and Household Growth Dynamics, Potential First-Time Buyers, in the Focus Countries

	Population					Households			
	Thousands			CAGR		Av HH Size	Thousands		CAGR
	2015	2050 (p)	Increase	2014	2015-2050	Latest	2015	2015-2050	2015-2050
Morocco	34,378	40,105	5,728	1.46	0.44	4.70	7,314	1741	0.61
Tunisia	11,254	12,315	1,061	1.01	0.26	4.05	2,779	374	0.37
Egypt	91,508	137,261	45,753	1.61	1.17	4.40	20,797	14855	1.55
Palestine	4,668	8,692	4,024	2.96	1.79	5.85	798	983	2.32
Jordan	7,595	10,727	3,132	2.25	0.99	5.40	1,406	829	1.33
Lebanon	5,851	5,081	(770)	0.96	-0.40	4.30	1,361	-256	-0.59

	Population		Age Group 15-25 yrs				Expected Nuclear Families	
	Thousands	Thousands	%	Thousands	%	Growth	Thousands	Thousands
	2015	2015	2015	2025	2025	2025/2015	ca 2020	ca 2030
Morocco	34,378	6,081	17.7%	5,723	15.3%	-5.9%	2,128	2,003
Tunisia	11,254	1,756	15.6%	1,632	13.5%	-7.1%	615	571
Egypt	91,508	15,844	17.3%	18,026	16.9%	13.8%	5,545	6,309
Palestine	4,668	1,014	21.7%	1,156	19.6%	14.0%	355	405
Jordan	7,595	1,442	19.0%	1,569	18.8%	8.8%	505	549
Lebanon	5,851	1,140	19.5%	715	13.5%	-37.2%	399	250

Source: United Nations (2015). Probabilistic Population Projections based on the World Population Prospects: The 2015 Revision. Population Division, DESA. <http://esa.un.org/unpd/ppp/>

Notes: – upper table – 2015 population for Lebanon excludes Syrian refugees; lower table – nuclear family first-time buyer forecast derived by dividing age group 15-25 by two and correcting by 30% for potential non-marriages, then shifting by 5 years.

⁸ Example: available population size estimates for Egypt for 2014 vary from 83.5 to 89.5 million. The UNDP gives 3 different estimates on their website.

⁹ Available household size data entail major margins of error since the household statistics in the focus countries, with the exception of Palestine, are not part of the UN population and housing survey compilations, and thus not vetted and standardized.

derived from the general UN population forecasts and is reported in the lower segment of Table 1. Until 2035 the relevant age group will grow by 40% and more in Egypt and Palestine, and by 20% in Jordan. It will remain constant in Morocco and Tunisia and significantly decline in Lebanon (again, excluding Syrian refugees). The largest first-time buyer market both in absolute terms and its dynamics is Egypt, 3 times as large as Morocco's and 12 times as large as the markets of Jordan, Palestine and Tunisia.

Country evidence:

- Morocco:** population growth is still very dynamic, even though the rate is declining. Official sources estimate less than 1% p.a. until 2020 and the UN projections for 2015-2050 yield 0.44%. The Moroccan statistical office suggests a significant reduction of the average household size which has fallen from 5.5 in 2010 to 4.7 in 2014, to decline further to 3.9 in 2020. The currently observed slowdown in the market casts some doubts on whether Morocco can continue on the fast historic downward trend. Nevertheless, the 30% reduction assumption until 2050 may understate long-term developments.
- Tunisia:** although the population growth is rather modest overall, the annual additions of new households have been estimated by the World Bank to be around 60,000 or 2.2% p.a. This reflects the significant decline in the average household size in recent years, supported by strong new construction activity. The statistical office reports 5.8 persons for 1989, 5.14 persons for 1999 and only 4.33 persons for 2009. The 2014 census yields 4.05 as an average, but only 3.9 for urban areas. The data imply that a 30% reduction in average household size in the past was reached in Tunisia in only 25 years.
- Egypt:** the population is currently growing by an estimated 1.85% per annum. According to the UN projections, that growth rate will decline only to a level of 1.2% over the long-term, but with this level still remain the second largest in the focus countries.
- The number of newly formed households is currently estimated to be 300,000 p.a. With 50% of the population below 25 years of age, it means that this figure is likely to increase in the next years. Combining the UN projection with our 30% household size reduction assumption yields over 400,000 new households per year.
- Palestinian Territories:** with 1.8% growth until 2050, Palestine is characterized by the highest projected annual population growth in the country sample. The population is expected to double by 2055 – and to do so within a precarious economic environment, one of the key reasons for political instability in the region. Moreover, average household size with 5.8 persons is the highest, and thus housing needs here have the highest potential of all the focus countries to translate into demand, if and when affordability improves.
- Whether household size in Palestine can actually decline by 30% going forward, as assumed in Table 5, is doubtful. In the past 10 years, as a result of low construction activity, conflict-related damages in Gaza and the land constraints imposed on West Bank investors, household size seems to have barely changed.
- Jordan:** Similar to Palestine, Jordan combines high population growth – of 1% p.a. – with overcrowded housing as indicated by the high average household size of 5.4. Commentators

even before the Syrian refugee crisis spoke routinely of an ‘urban housing crisis’ in Jordan.

Housing indicators collected by UN Habitat suggest that the average household size for Jordan has not declined between 2004 and 2013. It remains at the second highest level within the focus countries. This points to problems of significant affordability, access to finance and housing supply. A 30% reduction in average household size even over a long time frame is a challenge.

- **Lebanon:** on pure numerical terms, and excluding the current Syrian refugee situation, the combined effects of population and household formation dynamics for Lebanon would indicate only limited stress. Household formation has less potential than elsewhere thanks to significant emigration and moderate population growth. While income levels for sections of the population and those of expatriates and diaspora seeking housing in Lebanon are significantly higher, much of this demand goes into land and house price levels. Because high price levels block household formation, European average household sizes remain unattainable.

2.1.2. Internal Migration and Displacement, Refugees

Rural-urban migration, urban overcrowding. The 6 countries are still in a phase of growing urbanization as shown below. The UN statistics described in Table 2 and recomputed by the authors to arrive at spatial household growth rates show a significantly higher population growth in urban areas than in rural areas across the region. The ratio between the two growth rates is somewhat lower only for Egypt and Palestine, both of which are handicapped by land-market and transportation constraints.

It can be assumed that most of the relatively safely projectable household formation identified in the previous section will be realized through demand for urban housing.

Table 2: Spatial Population Distribution Trends in the Focus Countries

	Population distribution (%)		Annual rate of population change (%)		Population growth, number p.a.			Household growth, number p.a.		
	2012		2010-2015		2010-2015		Multiple	2010-2015		Multiple
	Urban	Rural	Urban	Rural	Urban	Rural		Urban	Rural	
Morocco	57	43	1.6	0.1	320	19	17.1	67	4	18.55
Tunisia	67	33	1.3	0.4	100	14	7.3	21	3	7.78
Egypt	44	56	2.0	1.4	816	710	1.1	170	137	1.24
Palestine	75	25	3.1	1.9	108	23	4.7	20	4	5.53
Jordan	83	17	2.2	0.5	137	6	22.5	26	1	26.88
Lebanon	87	13	0.9	-0.2	44	(1)	#NV	10	(0)	#NV

Source: UN Social Indicators, Housing, Table 3b. World Development Indicators. Authors’ computations.

Notes: Computations based on 2014 population numbers. Rural household size assumed to be higher, urban household size assumed to be lower than average. Scale of adjustment depending on population distribution. The calculation does not consider Syrian refugees for Lebanon and Jordan.

A much more difficult quantifiable factor is rural-urban migration, which has been particularly intensive in Morocco.

Gaps between urban housing demand and the production of housing in urban areas are filled by the proliferation of illegal set-

tlements and slums and through urban overcrowding.

Country evidence:

- **Morocco:** the urban population grew by 4.5 million people, or 30%, between 2000 and 2015. A comparison with 2010 suggests that this growth has not been materially declining. It has translated into slums in numerous cities, in particular the metropolitan areas of Casablanca, Rabat-Salé and Tanger.
- **Tunisia:** almost the entire household growth in Tunisia has been urban. Cities have added 100,000 in total population between 2010 and 2015 and grown at 1.3% p.a. This increase has been to a large extent been accommodated by construction, of which 60% is taking place in the Tunis district and the Center-East region. This has to a large extent avoided the emergence of urban slums in Tunisia.
- **Egypt:** the urban population growth rate in Egypt is 2% p.a., and 44% of the total population now live in urban areas. The Egyptian government has tried to stem the urbanization trend as far as cities in the Nile valley are concerned – along with trying to stem the emergence of slums – through the creation of new towns. The results have been unsatisfactory. Whereas the Cairo housing situation in particular is characterized by extreme forms of overcrowding, in the 20 greenfield ‘desert cities’ around Cairo the lack of employment opportunities and services – starting with transportation – has resulted in an astounding occupancy rate of only ca 35%. The Egyptian government has most recently devised a much better planned and structured urban development policy integrating housing with infrastructure, proximity of jobs and on-site services in new urban centers. This has begun with the creation of ‘New Cairo’ about 35 km from Cairo itself.
- **Palestinian Territories:** the urbanization trend is hampered through severe land market constraints, largely imposed by Israel. Large areas of the land of the West Bank that is suitable for construction cannot be used for this purpose by Palestinians. For a detailed analysis of ‘Area C’ constraints and its impact inter alia on housing for the World Bank (see link/ Literature List, p68). Urban growth is further subdued due to a lack of infrastructure finance. Nevertheless the urban population is increasing fastest of the focus countries in absolute terms, driven by population pressure.
- **Jordan:** the UN data suggest an extreme urbanization trend for Jordan which would, if extrapolated, imply almost no rural household formation going forward. This would exacerbate the urban housing crisis, i.e. the amount of substandard and crowded housing in urban areas. Jordan so far has no effective decentralization policy from Amman, despite many political discussions.
- **Lebanon:** if current trends are guidance, the future housing demand is likely to remain concentrated in urban areas, i.e. the Mediterranean coastal strip. However, most of the Syrian refugee population is currently located in rural areas (Bekaa, northern Syria) and due to high land prices there are limited options to develop permanent housing in the coastal areas. Should the demand-pressure remain high, rural areas and small towns may gain in attractiveness again.

Refugees and internally displaced persons. Forced displacement is another important dimension of spatial deficit. Historically, the Palestinian refugees in the region were housed in camps which later

developed into semi-formal, high-density urban settlements. In contrast, the majority of current Syrian refugees in the region are no longer housed in camps but rather find shelter in the highly elastic, mostly informal rental housing sectors. A significant proportion even rent land and build shelter progressively by way of self-help. Purchase or new construction is affordable only in exceptional cases. For instance, Iraqi and Syrian high net-worth refugees have been active buyers in Amman or Beirut. The vast majority of rental tenures are legally informal (no contracts, low tenure security, lack of construction permits), given the deficiencies in local rental sector regulations, and many are also informal in terms of the building quality (unfinished, self-help) or lack proper permits.

Also, even the most sophisticatedly designed camps must be seen as part of spatial deficit. Physically decent temporary housing does not substitute for the lack of access to labor markets, to urban services and proximity to family and relatives. A UNHCR telephone survey in Lebanon in 2014 found that these three factors dominate shelter decisions made by refugees, ahead of that of rental costs, and are even on par with consideration of protection from the conflict itself (see Figure 9 in the appendix). As a result, fluctuation in the camps is high (e.g. Jordanian camps exchange 20% p.a.). Lebanon has refused to permit the erection of camps during the current crisis, arguing that the country already hosts 12 Palestinian refugee camps. A quantification of the long-term needs-impact translated from the headline numbers is highly speculative. After 5 years of war in Syria, even many middle income refugees in Jordan and Lebanon have spent their financial savings and have been forced to migrate onwards to Europe, or return to an unsafe situation in Syria. The political situation in Syria itself remains in flux. Labor markets in Jordan and Lebanon, and to a lesser degree property markets, are legally shielded against refugees. Yet the situation of the Palestinians in Lebanon and Jordan, whose hopes to return to Israel or at least the Palestinian territories were dashed with the failure of the Oslo peace process, serves as a warning that going forward greater integration of a certain number of Syrian refugees in Jordan and Lebanon may be unavoidable.

Country evidence:

- **Tunisia:** following the 2011 revolution and the collapse of the Libyan state, Tunisia has been facing an inflow of migrants from its neighboring country. Total Libyan immigrants are now

Table 3: Shelter Situation of Syrian Refugees in Lebanon and Jordan

Host country	Numbers of refugees ⁽⁵⁾ in host country	Shelter situation for refugees from Syria
 Lebanon	1,100,486	14% pay rent (an estimated 50 to 150 USD per month) in informal settlements. 14% pay rent (an estimated 100 to 200 USD per month) in unfinished buildings. 67% paying rent (an estimated 100 to 500 USD per month) in finished apartments. 35% receive some form of (humanitarian) shelter assistance. ⁽⁶⁾
 Jordan	597,328	83.7% live outside of camps 16.3% live in camps 50% live in sub-standard shelters. 58% of household expenditure is on rent. Rental prices of Syrian refugees in four governorates have increased by 25% or more between 2012 and 2013. ⁽⁷⁾

Source: Norwegian Refugee Council (2014).

Notes: (5) Numbers of Syrian refugees registered with UNHCR, or awaiting registration: <http://data.unhcr.org/Syrianrefugees/regional.php> This does not include Palestinian Refugees from Syria; (6) based on UNHCR telephone survey; (7) based on UNHCR/IRD home visit survey.

estimated to reach 400,000. The impact is felt less in quantitative terms than in terms of market conditions. Libyan immigrants are often wealthy households who tend to look for up-scale housing, which has been driving price increases in some urban areas.

- **Palestinian Territories:** the historic UNRWA-run camps built after Israel's independence and the Six-Day War are today built-up areas which, however, continue to be characterized by high levels of overcrowding. IDMC, a Norwegian-funded NGO monitoring internal displacements, estimates 'that in the West Bank, including East Jerusalem, at least 141,500 people remained displaced as of July 2015. This figure is an aggregate extrapolated from yearly statistics on forced evictions and demolition of Palestinian houses and structures upon which their livelihood depends.' Most of these people live in rental and informal shelter solutions and add to the quality deficit.
- **Jordan:** by the time of the emergence of the Syrian crisis Jordan already hosted 500,000 Iraqi refugees and, for more than 40 years, 2 million Palestinian refugees. Apart from 170,000 later arrivals the Palestinian have full citizenship as Jordan had control over the West Bank prior to the Six-Day War.

Several international agencies have comprehensively analyzed the shelter situation of the Syrian refugees: for a list of documents, see the annex. The comprehensive 2014 Syria Regional Response Plan drafted by UNHCR coordinates ca. 30 agencies to provide both sites and services for housing solutions, and to cater for rental solutions inside the existing housing stock. Next to 800,000 Syrian refugees the plan targets a 700,000-strong Jordanian population affected by deteriorating social and housing conditions, especially in northern Jordan.

Only 16% of the Syrian refugees in Jordan live in camps. This share seems to be stable as incoming refugees replace refugees exiting into the Jordanian housing market and into emigration. The vast majority of refugees live in rental and informal housing solutions that the Jordanian market provides. A majority of these refugees live under sub-standard conditions – e.g. the Norwegian Refugee Council (NRC) reports 3 times the level of overcrowding compared to the Jordanian population (persons/room) – and suffer from high rent burdens. Rental contracts do often not exist or are very short-term, exposing refugees to high eviction and/or rent review risk. The NRC estimates a housing deficit originating from the refugee situation of 48,000 units.

- **Lebanon:** the country has a long history since independence of internal displacement and external refugee inflow. The different spells of civil war and Israeli operations created millions of internally displaced people who have, however, become entirely integrated into the housing market. The ca. 450,000 Palestinian refugees continue to live in neighborhoods that emerged from refugee camps, and add to the qualitative deficit through overcrowding and substandard buildings. 50,000 additional Palestinian refugees from Syria currently add to the already often squalid conditions in the camps. The Norwegian Refugee Council also defines ca. 20,000 persons as IDPs, again all of them from the closing of a Palestinian refugee camp in the north of the country.

The officially estimated 1.5 million Syrian refugees are regionally concentrated in the Bekaa Valley and northern districts of Lebanon close to the Syrian border. However, squatter settlements have emerged in the central Mount Lebanon district. The government has not authorized centralized camps for Syrian refugees. A 2014 UNHCR survey found that two-thirds of refugees live in finished building rental solutions and an additional 28% live in unfinished buildings or informal settlements. Only a third of refugees in total receive some form of shelter assistance (see Table 3), which includes rent assistance to tenants.

UN Habitat and UNHCR (2014) review the available private housing solutions and policy options for refugees in greater detail and also provide generally a good introduction into Lebanese low-income housing policy issues. In particular, tenure security, both of land and housing, is found to be non-existent in the case of refugees, which severely discourages investment to complete unfinished units or upgrade informal or finished units. Most rental agreements are informal. According to UN-Habitat, eviction risk is also high because of official standard violations such as poor building conditions, overcrowding and cohabitation (defined here as more than 3 families per housing unit).

2.1.3. Quality Deficit

Access to services. There are very limited data available to characterize the regional upgrading and reconstruction needs for substandard housing. In the area of access to services, censuses and housing surveys provide a picture, as aggregated in UN data in Table 4. The services situation remains dire in rural Morocco – despite considerable progress in the last 10 years – and in rural Tunisia as well as parts of Lebanon. Access to drinking water is a major issue both in rural and urban Palestine as well as rural Jordan.

Capital repair needs. The quality of the housing stock is also not well documented for the focus countries, except for Morocco and Tunisia. Anecdotal evidence is discussed in the country sections below. One major driver of deterioration has been underinvestment in capital repairs resulting from decades of rent controls in all focus countries. Capital repairs are also hampered in urban condominium apart-

Table 4: Quality Deficit Indicators in the Focus Countries

	Improved Drinking Water Coverage (%)			Improved Sanitation Coverage (%)		
	2010			2010		
	Total	Urban	Rural	Total	Urban	Rural
Morocco	83	98	61	70	83	52
Tunisia	94	99	84	85	96	64
Egypt	99	100	99	95	97	93
Palestine	85	86	81	92	92	92
Jordan	97	98	92	98	98	98
Lebanon	100	100	100	98	100	87

Source: UN Social Indicators.

Notes: Coloration by authors to highlight ratios below 90% and below 80%.

ment buildings due to unsolved co-ordination issues between the owners of individual apartments when undertaking investments. Finally, the high age of the stock is an important factor – a result of decades of insufficient new construction and thus insufficient demolition and replacement activity of obsolete stock. An indicator for the huge modernization backlog related to the age structure and underinvestment is the absence of elevators (only in 6% of multi-story buildings) in largely urban and high-density Lebanon. A certain proxy to arrive at an idea of the scale of

replacement and modernization backlog is the composition of construction activity discussed in the subsequent subsection.

Informality and urban renewal. Building and space restrictions – and to a degree the discriminating laws limiting activity – make the largely informal Palestinian refugee camps the places in the region with the most serious capital repair, modernization and replacement backlog. Urban informal settlements have been permitted to develop in Lebanon, Jordan and Morocco while they are rare in Egypt and Palestine. In Egypt, however, many urban multi-story buildings were built outside formal processes and permits during the years following the 2011 revolution, in particular in the outskirts of Cairo. We mention the relation between permitting informality and urbanization rates above. Urban renewal policies that formalize informal settlements are most active in Tunisia and Morocco while Lebanon, Egypt and Palestine have created high hurdles for action on formalization.

Country evidence:

- **Morocco:** the active government policy described in further detail below has yielded important results not only in the quantity of available housing, but also in the quality of the stock. Between 2004 and 2014, according to census results, the share of rural Moroccan households with access to electricity and running water has doubled (38% and 55% respectively in 2014). The share of urban households living in slums, precarious or substandard homes reached a peak at 8.2% in 2004 with 420,000 units, declining to 5.6% in 2014. Outside of urban slums, the share of dilapidated housing is said to be noticeably increasing, probably due to spatial mismatch (emigration, internal migration). Also, a legacy of rent controls has led to substantial under-maintenance of urban apartment buildings.
- **Tunisia:** based on its own accounting Tunisia has successfully reduced substandard dwellings in the past decades. The ratio of the statistically defined ‘rudimentary dwellings’ has declined from almost 24% in 1975 to 4.9% in 1989 and to 0.3% in the 2009 census. However, more than even in Morocco the quality of the urban housing stock has been deteriorating due to the lack of proper maintenance. This is caused by several factors, including the absence of formal property titles in the traditional medinas, the poor management of the social housing and the insufficient returns of rental investment. The latter is due to strict rent control regulation that was lifted in 1978, but only for new leases. Moreover, informal housing still represents an estimated 25% of the housing stock, and holds a significant share of the new construction in urban areas.
- **Egypt:** despite satisfactory data on water and sanitation access, the significant gap between the need for and the production of new housing in the right locations is resulting in an ever increasing amount of informal and substandard housing. It has been estimated that 15 to 20 million Egyptians live under such conditions¹⁰

Rent control laws were introduced in Egypt in the 1940s and 1950s. For new leases, controls were abolished in 1976, and with them the indefinite transmission of leases to heirs. However, the extensive grandfathering clauses, including permission to bequeath the lease once,

¹⁰ CAPMAS 2013.

resulted in only a gradual decline of the affected stock. As a result, historic Cairo city apartment districts suffer enormously from deferred capital repairs and insufficient maintenance. Investor fears over an imposition of new rent controls is also a driving factor behind the large number of urban housing units left vacant or unfinished.

- **Palestine:** while the quantitative deficit due to crowding is large in Palestine, a substantial part of the widely differing housing deficit estimates (see below) refer to substandard and obsolete housing.

About half of the deficit is typically attributed to the heavily overcrowded Gaza Strip with its almost entirely substandard housing units, especially in the ‘camps’. In addition, according to NGO estimates, the 2014 war in Gaza eliminated ca. 17,000 units¹¹, adding a quarter to a fifth to the local quantitative deficit. A dramatic 2015 UNDP assessment even warned that the Gaza Strip might be ‘uninhabitable’ by 2020, given the huge problems ahead to fix the urban infrastructure.

A source of qualitative deficit with greater relevance on the West Bank is the legacy of nearly 70 years of strict rent controls. Many Palestinian rental contracts were frozen after the creation of the State of Israel and remain so until today. Intergenerational equity issues between renter generations in Ramallah due to different regulations are among the worst in the region.

- **Jordan:** quality deficits are historically large and exacerbated by the dual urban housing and refugee housing crises. In rural Jordan, families tend to have many children, and it is not uncommon for 12 to 15 family members to share a small two-room house. Substandard sanitation and in particular water access is a major problem.

In urban northern Jordan, the refugee crisis has led to social tensions regarding a shortage of sufficient quality housing. 69% of survey respondents to a British Embassy sponsored project (2014) considered access to housing in their community to be inadequate.

- **Lebanon:** aside from the situation regarding refugees, the bulk of the Lebanese housing deficit is in the form of quality deficit that has arisen from decades of under-investment and neglect of maintenance and capital repairs.

Policy issues include decades of rigid rent controls which were only removed recently, low affordability for tenants unable to get public support (with 44% of low-income households being renters), as well as a system of public mortgage market subsidies that has sidelined investment into the existing stock and discouraged the new construction of lower cost stock.

A second large source of the quality deficit is due to the legacy of war and displacement. 53% of the urban population was living in slums in 2005 before the 2006 war with Israel which displaced additional tens of thousands (UN Habitat 2009). According to Fawaz and Peillen (2003) the time there were 24 slums in the metropolitan urban area of Beirut, which housed some 300,000, i.e. 20% of the population. Low-income families typically access urban housing

¹¹ <http://www.telegraph.co.uk/news/worldnews/middleeast/gaza/11065608/Gaza-war-destruction-will-take-20-years-to-re-build.html>

through informal settlements and (Palestinian) refugee camps. Construction in these areas typically combine several forms of illegality, such as violations of building and construction codes, urban regulations, and property rights. The majority of Palestinian camps were illegally built on public or private lands with the deficiency in access to sanitation and water as well as municipal services that that implies. In 2001, a law was passed that prevented Palestinian refugees from owning properties in Lebanon.

2.1.4. Housing Needs Summary

- **Overall housing needs calibration.** Table 5 presents a possible, in our view plausible, scenario for housing needs per annum in the focus countries. It takes into account the relatively safe population and household growth projections as well as rather unsafe assumptions about the existing number of occupied housing units, the numerical deficit of housing units vs. the number of households, and the spatial and quality deficits described in the previous sections. We make the following assumptions:
- For those countries where current housing census data are not available we extrapolate the published census data, usually dating back to 2004, with available or estimated construction data and compared the result with available deficit estimates
- For the numerical deficit we treat vacancies as non-existent, since we assume in markets characterized generally by strong demand that they are either unmarketable or not marketed

Table 5: Quantification of Housing Needs, Plausible Scenario

	Population		Households		Housing				Population		Households****		Housing Needs*****	
	Number		Number	Average	Stock*	Cohabitation	..plus Q & S	Deficit	Increase	CAGR	Increase	CAGR	per annum	implied
	2015	Latest	Latest	HH Size	Latest	Deficit**	Lump-sum***	% of stock	Thousands	2015-2050 (p)	Thousands	2015-2050 (p)	Thousands	2015-2050 (p)
Morocco	34,378	7,314	4.70	6,706	200	871	13.0%	5728	0.44%	1741	0.61%	75	0.94%	
Tunisia	11,254	2,713	4.05	3,290	0	329	10.0%	1061	0.26%	374	0.37%	20	0.56%	
Egypt	91,508	20,797	4.40	19,323	1474	3406	17.6%	45753	1.17%	14855	1.55%	522	1.92%	
Palestine	4,668	798	5.85	710	88	159	22.4%	4024	1.79%	983	2.32%	33	2.78%	
Jordan	7,595	1,406	5.40	1,323	83	215	16.3%	3132	0.99%	829	1.33%	30	1.68%	
Lebanon	5,851	1,361	4.30	1,293	68	197	15.3%	-770	-0.40%	-256	-0.59%	-2	-0.13%	

Source: As Table 1. National statistical offices. Authors' observations, assumptions, and computations.

Notes: The following observations and assumptions are made:

*Stock extrapolations from latest census data with construction data – Tunisia 2014 census, Lebanon assumes 5% cohabitation ratio;

**Difference between number of occupied housing units and number of households – vacant (unoccupied) housing units are ignored;

*** Lump-sum 10% of the stock for quality deficit and spatial deficit (rural-urban migration) plus numerical deficit;

****Assumes decrease of average household size by 30% by 2050;

*****Housing needs 2015-2050 p.a. = deficit (household cohabitation in occupied units + lump-sum adjustment for quality and spatial mismatch)/35 + population growth 2015-2050 p.a. – household size [persons/household] growth 2015-2050 p.a.

by their owners for certain reasons. Where a numerical cohabitation deficit (households minus housing units) is reported, we use the figure; where it is not reported, we make assumptions about the cohabitation ratio

- For spatial mismatch and quality deficit we use the rather optimistic assumption of the same lump-sum ratio of 10% over the housing stock for all countries. This shortcut is due to severe data constraints discussed above; however, a check with available anecdotal deficit estimates suggests that such a calibration might not be wide of the mark for the focus countries, with exceptions (e.g. Gaza)
- Throughout we exclude from the calculation the impact of the current Syrian refugee crisis.

Country evidence:

- **Morocco:** the legacy deficit was estimated in 2010 at the time of the new government housing policy at 840,000 units or some 13% of the housing stock. That estimate, as with our broad-based approach, ignores rural vacancies. Considering the scale of urban-rural migration, the World Bank estimates that over 1 million households will need a home in urban Morocco within the next 5 years. Our estimate presented in Table 5 starts in the neighborhood of the first mentioned figure and arrives at 75,000 p.a. in annual housing needs. So that even if the deficit is closed only slowly until 2050, the housing stock needs to grow by 0.94% per year. Almost all of these needs will materialize in urban areas.
- **Tunisia:** according to the 2014 census, Tunisia has apparently eliminated the quantitative housing deficit and now has 580,000 more housing units than households, hence a 17.7% national vacancy rate. These vacancies reflect houses that are too dilapidated to be livable, second homes, units bought as a mere refuge investment, or left vacant for fear of rent controls. It is thus reasonable to assume a much lower surplus or even zero, as most of the vacant stock may not be put to housing use. Tunisian housing needs depend strongly on the household size and further rural-urban migration assumptions. With our moderate household size decline and starting from a zero legacy deficit we arrive at 20,000 units needed p.a. – almost entirely urban – or 0.56% of the housing stock. Intensifying urban-rural migration could double or triple that number.
- **Egypt:** the largest housing shortfall in the region is in Egypt, where official estimates put it between 1.0 and 1.5 million units¹². We arrive at a similar deficit just for the cohabitation factor when comparing available data for numbers of households and numbers of housing units. This exercise indicates a 5% household cohabitation ratio. A cursory view of quality and in particular spatial mismatches in Egypt would add at least 10% to the quantitative deficit. In our analysis, assuming a 30% decline in average household size, newly formed households imply an additional demand of more than 400,000 units a year. This should be supplemented by some 100,000 units p.a. to absorb the deficit until 2050, which takes annual housing needs to a total of over 500,000 units or 1.9% of the stock p.a. Official estimates that probably use higher household size assumptions (i.e. a slower decline) still arrive at 1.5% p.a.

¹²

Source: Ministry of Housing, Utilities and Urban Development and John Lang Lassalle.

As in the other countries, this calculation needs to be treated with a great deal of caution, in large part because shortage coexists with a large number of vacant units. These could be put to use in the market, e.g. by improving contract enforcement security for their owners when they are offered as rental units. Overall vacancies in Egypt were estimated to be higher than 3.5 million units in 2006, including the large vacancies in the desert towns.

- **Palestine:** the official 65,000 cohabitation deficit is as of 2010, according to the PCBS is based on census extrapolations and needs to be extrapolated to 2015, at which point it might have grown to ca. 85,000. The 150,000 deficit figure discussed by the World Bank (2015) is then reached when adding our lump-sum 10% quality and spatial mismatch assumption. We arrive at the largest legacy deficit compared to the stock in the focus countries. Adding population and household growth dynamics, Palestine would then lead the league table of housing needs in the focus countries, with 2.8% of the stock p.a. Vacancies have been an issue in Palestine, although these are in isolated locations. An example is high-priced apartments on the Gaza coastline built after the Oslo peace agreement in the 1990s and unaffordable to the local population.
- **Jordan:** the consulting firm REACH in a survey for the British Embassy (2014) on the refugee housing situation identified 86,000 housing units as being required to meet Jordan's 'immediate housing demands'. The authors come up with a similar figure without taking into account the impact of refugees and extrapolating the 2004 census housing stock data, combining it with the low historic construction activity and with population growth and household formation since the census. Adding our quality and spatial mismatch lump-sum 10%, the current national deficit should be instead in the neighborhood of 200,000 units, which in total translates into a ca. 30,000 annual housing need, or 1.7% p.a. Catering for the demand of Syrian refugees over the next 10 years, under the assumption that half of them stay in Jordan, would increase that figure to ca. 40,000, above 2.1% of the stock p.a. Vacancies are an issue in Jordan especially in the high price segment.
- **Lebanon:** the authors find the Lebanese historic building census data to be incompatible with household data derived from official household size figures and population estimates. We assume a 5% cohabitation ratio (household/housing unit ratio). Adding to this the 10% quality and spatial adjustment would give a deficit of ca. 200,000 units. Given the declining population, excluding Syrian refugees, closing that deficit will mean that housing needs are expected to stagnate over the coming decade in quantitative terms.

2.2. Housing Investment Gap and Construction Financing

2.2.1. New Construction Gap

New construction activity. How much of the needs described above is currently realized? The scale of new construction activity is unfortunately not well documented for the focus countries. A housing sector database or data dissemination standards developed by international development agencies does not exist and national statistical offices use different methodologies and concepts. For instance, in Lebanon published construction data gives measures in square meters instead of units and includes commercial real estate. Palestine publishes both square meters and units, so in another optimistic

assumption Palestinian average square meters per unit may be used as an instrument to arrive at Lebanese unit construction as in Table 6 below. Adding to the difficulties is that the data seen by the authors relate to building permits and not completions. These problems have prompted international agencies to use proxies such as the consumption of cement and other construction input to estimate activity.

Yet we find such an indirect approach even more dubious than working with the scarce available direct data. In Table 6 we therefore present proxies for the construction dynamics for selected countries, from a patchwork of data sources that directly address construction. For the gap analysis we will consider average construction over the available data years since 2010, i.e. either 4 (-2013) or 5 (-2014) years.

Table 6: Construction Activity and Global Production Gap in the Focus Countries

	Housing needs		Replacement*		Construction**		Production gap	
	Thousands	implied	Thousands	implied	Thousands	implied	Thousands	implied
	2015-2050 (p)	CAGR of stock	2015-2050 (p)	CAGR of stock	Latest av since 2010	CAGR of stock	Latest	CAGR of stock
Morocco	75	0.9%	192	2.0%	130	1.5%	136	1.5%
Tunisia	20	0.6%	94	2.0%	80	1.8%	34	0.8%
Egypt	522	1.9%	552	2.0%	200	0.9%	874	3.0%
Palestine	33	2.8%	20	2.0%	12	1.3%	41	3.4%
Jordan	30	1.7%	38	2.0%	10	0.7%	58	3.0%
Lebanon	-2	-0.1%	37	2.0%	14	0.9%	21	0.9%

Source: Authors' assessment of available construction data, replacement assumptions, and computations.

Notes: *2% of stock, assumption; **construction data based on available permit statistics, authors' estimates, for detail see text.

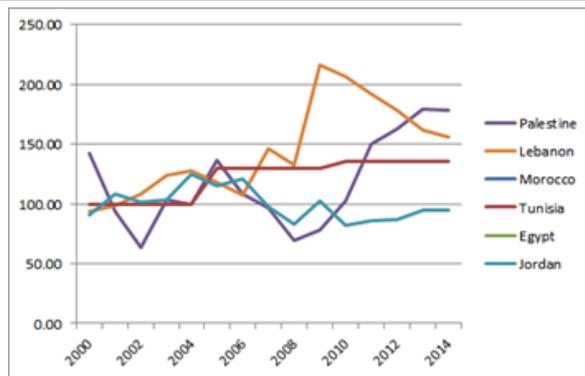
Global construction gap. Table 6 first adds stock replacement requirements to the needs estimates. This reflects stock depreciation in the form of units becoming obsolete or needs for capital repair and modernizations accumulating. We assume, very conservatively, a replacement ratio of 2%. This is a lower boundary: Donthé et al (2005) had assumed 2.5% for the Middle East, and the discussion in Europe goes even towards applying a 3% annual replacement ratio due to increasing technological and energy conservation standards that will increase the depreciation rate of existing housing units.¹³ The forward-looking ratio has to be viewed as strictly separate from the initial, historic deficit estimate. Finally, it does not cover war and other one-time depreciation events.

After comparing with our construction activity estimate, we identified the most severe production gaps in Jordan (large needs meeting highly insufficient construction activity), Palestine (greatest needs meeting modest construction activity), and Egypt. The available data seems to indicate that Tunisia and Lebanon are best able to cover their housing and replacement needs through production in pure quantitative terms. Morocco needs an intensification of its already strong construction performance to catch up with needs.

¹³ E.g. there is discussion currently regarding increasing depreciation factors in German property taxation.

Low- and middle-income housing construction gap. Yet the big challenge in the region is mismatch of formal finished house prices with incomes. Reducing finished prices is difficult due to high cultural and technical standards for housing and the organization of the housing market. Construction firms and government entities alike are dominated by engineers, who typically agree on detailed urban master planning, elegant but expensive vertical building designs and high construction material quality. Consumer preferences in part meet these technical preferences as housing must not only accommodate large families, and provide high space consumption per capita levels as a status symbol, but also perform the role of a flight-to-safety alternative for financial savings in an unstable economic and financial environment. Many governments fail to formulate and implement low-income housing policies that stimulate diversified tenure, and to encourage the public, co-operative housing and sometimes private corporate housing institutions that could bundle the demand. The exception here is Morocco, which systematically supports low-cost housing supply, as detailed below. Finally, the lack of empowerment of the demand-side contributes to supply-side dysfunctionality and uniformity.

Figure 1: Proxies for Construction Activity in Selected Focus Countries



Source: Statistical offices, authors' computations.
Notes: construction permits (likely in varying definitions, partly not disclosed), units; Lebanon recalculated with average Palestinian sqm per unit figures; average 2000-2003 = 100.

From the developer perspective, in many cases project size is subscale due to difficulty with land access and in particular land servicing by local governments. Also funding costs for developers are high, with developers often turning to buyers to finance construction. With the advent of mortgage finance, margins for developers are rising; however, formal developer finance from banks remains scarce and highly procyclical, further encouraging boom-bust activity. In smaller countries, the funding problems of developers have accentuated the concentration trend in the developer industry. Public-private partnership has sought to overcome some of these constraints, for instance in the form of tax subsidies, soft loan conditions and subsidized serviced land provision benefiting construction. In some countries, developers of public and semi-public housing and land play an important role. They tend to push supply-driven solutions with limited subsidy content into the market.

Country evidence:

- **Morocco:** quantitative housing deficit has been steadily decreasing in the last 15 years, a result of forceful government policy to stimulate production. The objective of building 500,000 new houses between 2010 and 2015, two-thirds of which for low income segments, seems to have been achieved. Taking averages of a yearly production oscillating in the past 5 years between 90,000 and 170,000 units, we nevertheless estimate an annual gap in the range of 136,000 units or 1.45% of the housing stock.

Several government programs attempt to push down the price of newly constructed housing. In the 'Social Housing' program, unit sizes must be between 50 and 80 square meters, and prices are capped to DH 250,000 (ca EUR 23,000) while buyers are exempt from paying VAT. Developers who agree to build a minimum of 500 social housing units over 5 years benefit from a 50% reduction of the corporate income tax. Initially, the minimum number of units required for the benefit was 2,500, but this requirement was lowered since it greatly favored large developers over small local ones. Home buyers must occupy the unit for at least 4 years before getting permission to resell, or pay the VAT to government. A very low-income housing program, 'Logement à Faible Valeur Immobilière Totale' (FVIT), targets households earning less than 1.5 times the minimum wage (about DH 3000, or EUR 280) per month, with sale prices capped to DH 140,000 (about EUR 13,000).

The Social Housing program got off to a strong start, to the point that a glut of units has been created in recent years. Over 600 private developers signed up to it and some large developers, such as Addoh; one of the biggest, are participating in this program. In contrast, the low price-limit of the FVIT program seems to be a deterrent for private developers, and most of the developments are initiated by Al Omrane, the Moroccan public agency for land development and low-cost housing projects.

Morocco's direct tax support measures stimulated both the delivery of affordable housing and the emergence of a low-cost developer market. However, the model is currently approaching its limits due to the oversupply it created in a number of cities; a lack of diversification of building designs; incongruence between house price limits and local construction and land costs; insufficient targeting of the significant subsidies as many poor households cannot afford finished housing even at moderate price levels, and an increasing dependency of developers on a continuation of the flow of subsidies, which raises the question of fiscal sustainability.

- **Tunisia:** has seen a considerable increase in activity since the 1970s when typically only 15,000 units per year were built. The housing stock has increased between 2004 and 2014 – the two last census years – by an annual average of 79,000 units or 1.8% per year. This matches the number of new households and our quality and spatial deficit assumption, but does not suffice to cater for replacement needs or larger future rural-urban migration waves. We arrive at a moderate gap of 34,000 units or 0.8% of the housing stock.

Behind Tunisia's thriving construction numbers there is a mixed picture since finished housing constructed by developers is unaffordable for a growing portion of the population. The production is geographically very concentrated, primarily in the greater Tunis area, and ignores the segments below the median of income distribution. Typically, in Tunis' outskirts, a 55 square meter apartment costs around TND 70,000 (USD 35,000) or 6 times the median income in urban Tunisia – a multiple of 4 /4.5 is considered as the upper limit of affordability.

The public sector, which was responsible for 60% of the production in the 1970s, today represents a mere 1%. Currently, 80% of new homes are self-built in progressive mode, with a growing proportion that is built informally. The government is trying to address this imbalance by reviving some of the pro-active housing policy of the past. A set of agencies have

been created to stimulate or develop new housing, including for social housing (SNIT), for other rental solutions (SPROLS), and for the acquisition of land banks and the development of urban land 'Agence Foncière d'Habitation' (AFH). Tunisia also plans to enhance the social housing sector under a special program 'Programme Spécial de Logement Populaire', which aims at replacing or renovating 10,000 dwellings in substandard conditions and building 20,000 social housing units to be sold to low income households with a large financial support from the State. In addition, fiscal incentives are provided for specific purposes such as student housing and rental investment for low income tenants.

- **Egypt:** has officially produced in the last 15 years between 150,000 and 200,000 new housing units per annum. The trend has been towards an increase in private sector contribution after the government significantly scaled back investment. The current production level is not nearly sufficient to provide for household formation and reduce the legacy deficit, even under the assumed long-term horizon, until 2050. In addition to the near 500,000 units needed to meet demand, about the same number is needed for replacement. We arrive at a deficit of nearly 900,000 units per year, or 3% of the housing stock p.a.

It should be noted that during the years that followed the 2011 revolution, many multi-story buildings were erected illegally in the Cairo outskirts, in particular on agricultural land. Their exact number is not clear and they are very likely excluded from official construction numbers. The government has been considering an amnesty to allow the regularization of this stock, except for the most flagrant violation of zoning or height regulations.

Low cost and mass housing construction in the past was almost exclusively implemented in a series of new towns that collar the Nile valley in adjacent desert locations. About 20 'desert towns' were built, but far away from job opportunities which resulted in high transportation costs and congestion – and in very high local vacancy rates. In new cities private developers such as Orascom – building on government provided land – offer units starting at EGP 160,000 (USD 20,000).

Starting with a Social Housing program that aimed at building 500,000 new units between 2006 and 2011, housing policy has shifted from supply-side support to direct demand-side subsidies, although the allocation of government-owned land remains critical to achieving low cost levels.

The latest and most ambitious housing program aims at the construction of 1 million new houses in 6 years. The program is related to a new policy paradigm recently developed with World Bank support and put into law. This links government support to housing developments if they integrate with job creation and offer access to services and infrastructure. Also, a better regional distribution of housing subsidies among governorates is aimed at – 13 areas have been selected nationwide. The main subsidy program, AMP (see below), will use PPP agreements with private developers and builders to achieve these objectives. A law recently allowed the government to dispose of State land for free as part of PPP based projects.

An important application of the new provisions should be the ambitious project of creating a new capital ('new Cairo') to the East of the current metropole. A real estate tax authority was

established in 2014 to conduct property revaluation and the collection of the newly introduced real estate tax – due on properties above a certain value threshold. This should eventually contribute to the financing of urban development.

- **Palestine:** there is reasonable documentation of construction activity by the Palestinian Central Bureau of Statistics (PCBS). New construction as measured by construction permits has increased significantly in recent years. The 2010-2014 average exceeds the 2005-2009 average by two-thirds (see also Figure 1). The current production level of 12,000 units p.a. means a thriving 1.3% p.a. addition to the stock. However, it still runs significantly below the high level of needs. We estimate a gap of 41,000 units or 3.4% of the stock p.a.

Finished housing in Palestine is primarily available through the market and developers play a strong role both in policy formulation and even mortgage banking (see subsequent section). Massar and Amaar are two large developers that have started large middle-income housing projects, usually within commuting distance of larger cities in the West Bank. The minimum cost of such projects per housing unit has been USD 70,000, which is marketed as a discount of 15-20% to typical city prices. In 2014 Amaar started changing the typical construction design from 'vertical' (multi-story housing) to 'horizontal' (terrace housing). This move is expected to lead to a cost reduction into the range of USD 50,000 and also lower levels of maintenance costs, but will still only be affordable to the small middle class. Low-income households are served either by the small co-operative housing sector, the public Palestinian Housing, or NGOs, typically as rental tenants.

- **Jordan:** our needs-analysis arrived at ca. 30,000 housing units p.a. Between 2010 and 2014 an annual average of just under 10,000 units received construction permission, under 1% of the housing stock. Adding replacement needs, we identified Jordan together with Egypt as having the second largest construction gap in the focus countries, at close to 3% of the stock, or 58,000 units p.a.

The Jordanian government has repeatedly initiated middle-income focused new construction programs. Production generally appears to have been priced on commercial terms, and sometimes demand at these terms has been miscalculated. For instance, the 'Decent Housing for a Decent Living' program initiated in 2008 was supposed to provide 100,000 mass low-cost housing units on serviced land owned by the Jordanian housing ministry HUDC. The median target price was a modest JOD 24,000 or USD 35,000. However, due to high interest rates charged by the financing banks and adverse locations of the land (reflected in the low house price), demand remained below expectations. Press reports suggest that the program is mired in controversy, including allegations of corruption surrounding contractor selection. Since 2010 the government has tried a policy-based approach through stamp duty reduction and other tax incentives for low-income housing construction. An evaluation of this new policy is still awaited.

- **Lebanon:** the house price boom of the late 2000s prompted a construction boom. Construction permits, measured in Lebanon in square meters, doubled between 2007 and 2010 (see Figure 1). Following which, permits declined again by ca. 30% – bottoming out in 2012 – until in 2014 they increased again to a small degree. We convert square meters into units using

Palestinian average square meters per unit as reference, which we consider as representative for the Lebanese construction standards. The result of this exercise is that with ca. 14,000 units constructed on average in recent years, only half of replacement needs are covered. Hence, despite the negative household growth dynamics (leaving out the number of Syrian refugees) we still find a production gap of almost 1% of the stock p.a. This observation of insufficient production is in line with the World Bank (2013), which, citing cement and other construction input dynamics, finds that housing construction remains anemic and ‘has not reacted to the Syrian refugee crisis in any meaningful way’.

Construction activity is also heavily biased towards the high end of the market. New housing in the coastal areas is de-facto only available through private developers. Due to the topography of the country and insufficient public service extension, serviced land prices there are very high. At the peak, the average per square meter apartment price in Beirut is in the range of USD 2,500. Even at the periphery of the coastal strip, the share of land cost to total construction costs does not fall under 35%. Also, demand has been concentrated in apartments starting at 200 m³ of living space, which are unaffordable to young and low-income households. Since the price peak in 2008 demand has downsized somewhat and encouraged production of units in the 150 –meter-range.

New units of 100 m³ and below which could qualify for low-cost housing are still unavailable in the private market. Builders and banks alike find this segment risky, since there is no culture of upgrading on the ‘housing ladder’ from smaller to larger units, i.e. large units are sought by households from the start. Construction costs in Lebanon finally rarely fall under USD 500/m³, which in summary means that new privately developed units under USD 100,000 are virtually nonexistent.

Public housing, which was always never available for Palestinian refugees, was mostly constructed in the period between the 1956 earthquake and the 1970s. In the ensuing war years, informal construction boomed. Some moderate-cost housing construction is undertaken today with the support of churches and other religious groups that provide some of their land reserves and usually receive finished units in return, to be distributed to special beneficiary groups. Sporadic formal semi-public low-cost housing construction was realized through the ‘Directorate General of Co-operatives’ and the ‘Displacement Fund’. Despite tenure and titling issues, the Palestinian camps continue to become overcrowded and urbanized. Public investment is largely left to the initiative of international organizations.

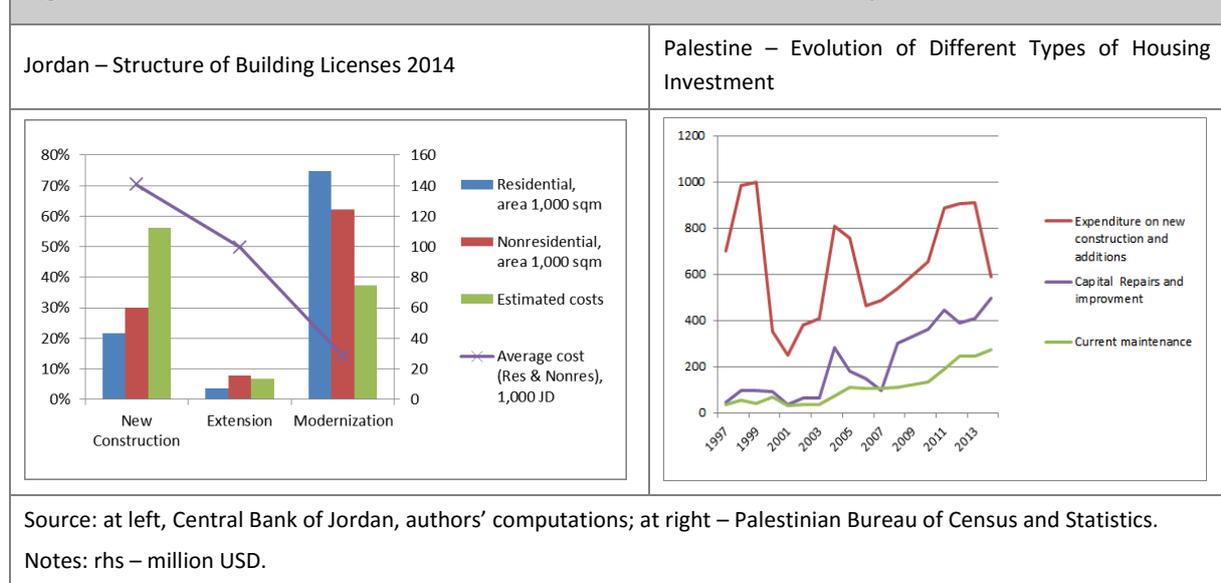
Tight public finances and high inflation prompted the government over time to focus on urban planning and infrastructure servicing policies in order to enable private or donor-sponsored public construction – to the degree that the Council for Development and Reconstruction (CDR) in charge of these policies is directly subordinated to the Prime Minister’s office. It has, according to the NCR (2014) since the 1990s made ‘several large scale planning interventions (physical, infrastructural, and social) including the National Master Plan of Lebanon (approved in 2009)’ and is the main interface of international donors in the housing area. Still, even that

relaxed approach is largely dysfunctional. An example is the ‘Elyssar’ project which was supposed to regularize the vast amount of informal construction in the south of Beirut: begun in 1995, the plan has yet to be realized.

2.2.2. Gaps in Investment into the Existing Stock

Home improvements and capital repairs. Capital repairs and improvements or modernizations are significant segments of the housing construction market in the focus countries. Figure 2 illustrates this for the cases of Jordan and Palestine, where statistics are available. In both countries, three-quarters of the new construction investment volume is reached with just the share of investment recorded through official building permits. Given the likely higher proportion that does not require building permits or is undertaken informally, the segment is likely to exceed new construction. The share in investment might be even higher for Morocco and Tunisia, where formal government programs support this type of construction activity.

Figure 2: Relative Size of New Construction vs. Extension and Home Improvement Markets



Nevertheless, little systematic data is available to characterize the segment. To what extent the current investment levels are a meaningful attack on the quality deficits must remain open, in particular regarding the multi-family housing stock where investments in common areas and installations outside the apartment, such as the repair of elevators or roofs, require owner co-ordination. The dynamics for Palestine seem to be indicative of the strong growth potential of the market segment.

Home extensions/additions and completions. In developing or emerging countries, many homes and even multi-story buildings remain unfinished and provide the potential for added stories and rooms. The reasons in the case of homes are affordability constraints that only permit for progressive construction; lack of construction finance; intentionally sequenced construction catering for future needs of an expanding family, and occasionally formality issues (e.g. tax evasion in Egypt). Households also tend to put their savings into bricks and mortar, adding continually to their existing buildings in order to store wealth. Extensions for the purpose of generating an additional income are done informally

outside any regulated rental framework. Such extensions in low income rural and semi-urban areas housing are built horizontally and are thus low-cost. In urban perimeters extensions sometimes comprise vertical construction, accessed inter alia by separate outside staircases. However, not everywhere do building codes permit this form of progressive construction. Improvement needs are very significant in the old traditional city centers, the medinas. Occasionally building statistics cover extension activity separately, e.g. in the case of Jordan, shown in Figure 2. The data are likely understated since they only reflect official building permits. Additions in Jordan require 30% lower investment per square meter.

Country evidence:

- **Morocco:** we have no statistical data on activity. Interviews with banks and microfinance lenders indicate that home improvements and capital repairs are of high economic relevance.

Several government programs aim at improving dilapidated housing and upgrading illegal settlements with the support of a dedicated fund 'Fonds de Solidarité de l'Habitat'. The Cities Without Slums program, 'Villes Sans Bidonvilles' (VSB), offers relocation options to slum dwellers in the form of a 'social housing' unit, a very low cost unit (see below), or a low-cost serviced individual land plot (100/150 m³). Most households prefer the latter option. An interesting model has developed – mostly in Casablanca whereby beneficiary households pay masons or small builders in kind, in the form of one apartment in the 2- or 3- story house that is being built ('tiers associé' model). This swap agreement allows an investment without credit.

In addition, the Moroccan government conducts upgrading actions in informal settlements, including legal regularization of houses which, although built without permits, comply with building regulations.

- **Tunisia:** we have no statistical data on activity. Existing stock investment activity has been propelled by a uniquely specialized government agency, the 'Agence de Réhabilitation et de Rénovation Urbaine' (ARRU). The agency was created in 1981 and has conducted a forceful urban renewal policy benefitting 2.5 million people since its inception.

Support for the renovation or upgrading of the existing stock and neighborhoods is the focus of several programs, such as the 'Fonds d'Amélioration de l'Habitat', or the 'Programme National de Réhabilitation de Quartiers Populaires'. These programs benefit from the support of external donors such as European Investment Bank (EIB) or the French Development Agency (AFD).

- **Egypt:** there is no data available. The government is considering a rehabilitation program for the historic housing stock as well as more recently-built illegally built existing stock. The latter program would involve financial incentives and be funded by fines or fees imposed for the regularization of the buildings.

The demand potential is concentrated in the city centers: given the low new-construction activity there relative to demand and the many multi-family buildings with extension options already prepared (staircases, structural pillars) in particular, the housing extension and improvement markets should gain significant scale. Also, many new units in Egypt are delivered

with only basic construction features, giving ample room for improvement lending. The market could be given a spark by the envisaged regularization of the situation of illegally built multi-family buildings. This will, however, depend on compliance with quality and safety standards.

- **Palestine:** the PCBS data record a strong increase in home improvement and capital repairs as well as maintenance investment from their negligible levels around 2000. The Gaza reconstruction effort will further support these figures, as is already noticeable in an increased share in maintenance investment recorded for 2014. However in Gaza activity is hampered both by low affordability and constraints imposed by the Israeli border regime on building materials deliveries. Public support has been limited historically to NGO programs.
- **Jordan:** in 2014 there were an estimated 27,500 construction licenses provided for existing residential buildings, i.e. for 2% of the existing housing stock. Therefore, in contrast to the highly deficient new-construction activity, modernizations and extensions appear to be making a visible improvement on the quality deficit problem. There were ca. 1,300 permits for home extensions, i.e. more than 10% of the number of new construction permits. The authors are not aware of dedicated public support programs.
- **Lebanon:** we have very limited information about the existing housing stock. It would appear from Clerc (2015) that the gradual lifting of decades of rent controls in the Beirut urban housing stock has prompted demolitions of buildings rather than comprehensive repair and modernization.

The potential for large scale modernization and capital repair of multi-family buildings is doubtlessly large. Most investment (and lending) is currently realized in ‘interior’ modernizations of apartments.

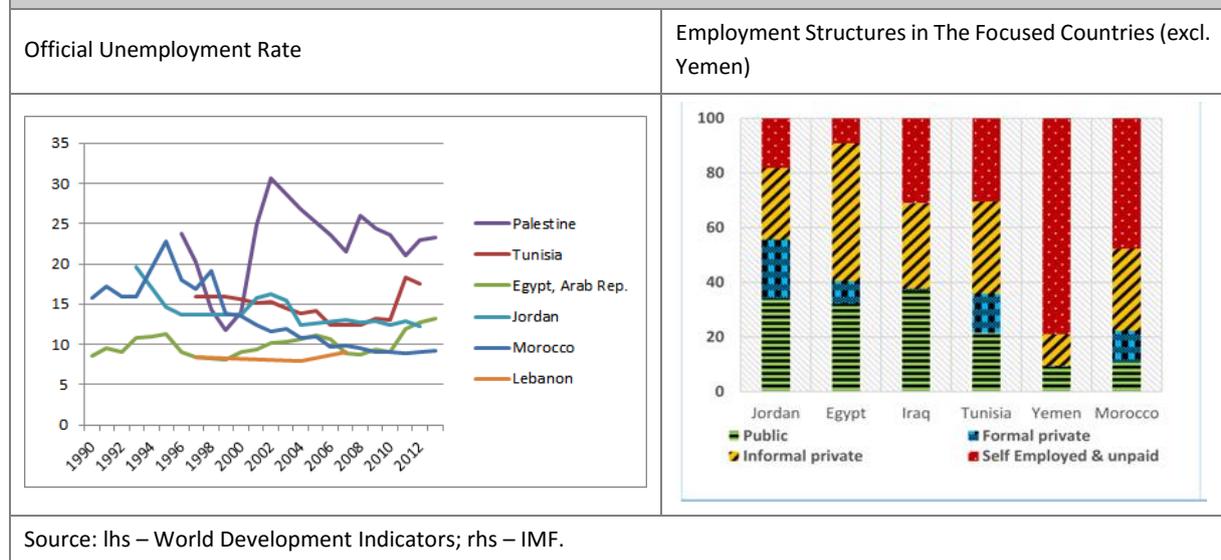
Capital repair and modernization investment in informal settlements and camps faces severe legal restrictions. Even when such projects are undertaken by NGOs, there are strict regulations in place, e.g. replacing the temporary zinc roofs with concrete roofs is banned (UNHCR).

2.3. Bankability of Households

The scope of housing finance, and the potential to expand it, first depends on broad, exogenous factors: the general breadth of the financial sector and the degree of households’ access to finance, the type of employment – given that mainstream banks do not lend as a general rule to informal sector households – and income levels. These three factors are examined in the following section.

Employment and income stability. Employment and related income stability is probably a more decisive credit factor in determining bankability for long-term finance in the region than income levels and even income distribution – the traditional (but also changing) factors in Europe. Informality levels and unemployment risk are major instability factors in countries with an only rudimentary social security backup to compensate for loss of income for basic needs, not to speak of finished housing mortgage payments. A picture of official unemployment rates and employment structures is given in Figure 3.

Figure 3: Employment Stability in the Focus Countries



Aggregate unemployment levels and their dynamics are very mixed. The range spreads from the continuously disastrous situation in Palestine – and here not only Gaza since the termination of the Oslo peace process in the beginning of the 2000s – to an improving Moroccan labor market – thanks in part to mass emigration – and a stabilizing, but fragile Lebanon. The shock increases in unemployment in Tunisia and Egypt demonstrate how significantly political risk determines bankability even in the case of countries that had previously gained a certain level of stability. Likewise Lebanon might join Palestinian unemployment levels – or worse – shortly if the Syrian war cannot be contained. Jordan is an example of greater stability, albeit at insufficient overall employment levels.

Unemployment is particularly resistant in specific socio-demographic pockets. Figure 10 in the appendix presents additional data on youth unemployment where rates in the region start at 25% due to demographic and structural labor and education market factors. Youth unemployment is a major driver of migration to Europe, especially in the Maghreb. In the Mashrek, refugees are routinely discriminated against by local labor laws. This currently affects Syrian refugees in Lebanon and Jordan who are not granted work permission. But even Palestinians who have lived in Lebanon for generations continue to live under restricted access to the labor market.¹⁴

Leaving political and macroeconomic shocks aside, income stability – and access to mortgage finance – is determined by the type of employment on offer, as sketched on the right side of Figure 3. Figure 11 in the appendix provides greater detail regarding informality by type of employment. Based on these data, in the focus countries formal employment reaches only 25-40%, with the highest levels recorded for Tunisia, Lebanon and Jordan.

This picture must, however, be adjusted to allow for the important differences between urban and rural areas. Female employment in the latter can be close to 100% informal. According to the International Labor Organization (ILO), the share of informal employment – defined as the absence of access

¹⁴ <http://www.middleeasteye.net/columns/ixty-years-shame-palestinian-camps-lebanon-23044460> reports that 'there are at least 25 banned areas of work in Lebanon for Palestinians, including medicine, law, engineering and pharmacy'.

to any form of social insurance – in urban areas was, in the early 2000s, 49% in Egypt, 44% in Jordan, 51% in Lebanon and 81% in Morocco. More recently – as shown in a World Bank study – this share was 51% in Egypt (2012), 69% in Morocco (2008), 59% in Palestine (2012), but only 25% in Tunisia (2010)

It must also be stressed that the decline of informal employment, which is very significant in Morocco, is not a general trend. To the contrary, informality tends to increase with political instability, for instance as is currently the situation in Tunisia. Within formal employment, low-paid public sector employment has often the largest share. The employment structure effectively shapes the segmentation of credit, with the lending by mainstream banks being biased towards civil servants while the large number of informal sector households would only be served by microfinance institutions (MFIs).

Table 7: Household Income Proxy Averages

	Date	GDP Current USD	Expenditures		Household size persons	Expenditures	
			Exp/GDP	per capita		per household per month	
Morocco	2014	3,103	1,881	60.6%	4.70	157	737
Tunisia	2013	4,317	2,944	68.2%	4.05	245	994
Egypt, Arab Rep.	2014	3,104	2,649	85.3%	4.40	221	971
Palestine	2014	2,992	2,852	95.3%	5.85	238	1,390
Jordan	2014	5,200	4,223	81.2%	5.40	352	1,900
Lebanon	2014	9,870	6,625	67.1%	4.30	552	2,374

Source: World Development Indicators, latest survey data on average household size. Authors' computations.

Finally, a substantial part of national income in the region stems from remittances, which are also highly unstable. For instance, Jordan in 2013 received 10% of GDP in remittances while the level in 2004 was 18% of GDP. This volatility is representative for the entire

region. The extreme case of volatility in recent years has been Palestine.

Income trend and levels. Table 7 and Figure 8 in the appendix show the income trend for the focus countries, as approximated by GDP per capita and household expenditures.

Three groups of countries can be distinguished:

- At ca. USD 3000 per capita GDP level, Egypt, Morocco and Palestine have the lowest domestically produced income level. On a positive note, as Figure 8 shows, that level has doubled in nominal USD since the mid-2000s in all three countries
- Jordan and Tunisia form a second group of countries with per capita GDP of USD 4000-5000. In the case of Jordan per capita GDP has increased 2.5 times since the mid-2000s. The Tunisian growth path, in contrast, was flatter, with an increase of two-thirds between 2002 and 2008, and income has since entered stagnation due to a protracted economic and political crisis
- Lebanon is alone in the third group with USD 10,000 per capita GDP, which again has doubled in the past 10 years. This trend is determined to large degree by emigrants who are repatriating after a successful career as well as wealthy immigrants who see Lebanon as a safe haven in an unstable region.

A commonly used proxy for household income, given that employment formality is generally low and the population subject to income tax limited, is household expenditures. Table 7 uses available WDI data and corrections applied by the authors in order to arrive at average household income levels. Ranked in this way, Moroccan households are poorest, followed by Egyptian and Tunisian.

This approach propels Jordanian and Palestinian households farther, thanks to their larger average household size. It has its justification since both per capita consumption and housing expenditures can be assumed to decline with household size. The figures are not corrected for purchasing power differences, though, which should narrow the differences again.

Finally, expenditure/GDP is a proxy for the autonomous savings capacity of the country in question to deploy for housing and other bulk investment. Jordan, Egypt and Palestine have the least capacity under this definition, i.e. they depend the most on transfers and remittances. Figure 8 in the appendix on the right side shows the dynamics. Lebanon in particular, after long years of high dependency has gained own-investment capacity from a growing domestic economy. Palestine, at the other end of the spectrum, consumes its current GDP entirely, and thus requires external savings to fund major investments.

Household income distribution, target groups. We can crudely approximate the numbers of households and their income levels that could be defined as low and middle-income (see Table 8) and thus serve as target groups for a lending program:

- The World Development Indicators (WDI) reports income quintiles (see Figure 12 in the annex) for the population of 5 of the 6 countries, excluding Lebanon. We convert these into an estimate of the number of households to be assumed in each income quintile. This approach requires assuming an average household size for each quintile, where size will typically decrease with rising income level. The reported mean of household size is assumed to represent

Table 8: Identification of Low- and Middle-Income Household Groups and their Housing Affordability

Approximate Household Income Distribution Based on Expenditures, Housing Affordability

Number of Households	Total	Quintile				
		I	II	III	IV	V
Morocco	6,876	1,170	1,243	1,317	1,463	1,755
Tunisia	2,251	445	472	500	556	667
Egypt	18,302	3,328	3,536	3,744	4,159	4,991
Palestine	805	128	136	144	160	192
Jordan	1,173	225	239	253	281	338
Lebanon	982	218	231	245	272	327

Income per Household	Mean	Quintile				
		I	II	III	IV	V
Morocco	8,840	3,530	5,335	6,934	8,840	17,289
Tunisia	11,924	4,435	7,194	9,453	11,924	18,854
Egypt	11,654	6,404	8,484	10,075	11,654	18,611
Palestine	16,682	7,341	10,673	13,440	16,682	27,048
Jordan	22,805	10,884	15,147	18,712	22,805	37,574
Lebanon	28,486	#NV	#NV	#NV	28,486	#NV

Income Per Capita	Mean	Quintile				
		I	II	III	IV = mean	V
Morocco	1,881	601	965	1,328	1,881	4,414
Tunisia	2,944	876	1,510	2,101	2,944	5,586
Egypt, Arab Rep.	2,649	1,164	1,639	2,061	2,649	5,076
Palestine	2,852	1,004	1,551	2,068	2,852	5,548
Jordan	4,223	1,612	2,384	3,119	4,223	8,350
Lebanon	6,625	#NV	#NV	#NV	6,625	#NV

Affordable house price @ 5%, 30 years					
	I	II	III	IV	V
Morocco	20,000	20,000	30,000	30,000	40,000
Tunisia	30,000	40,000	40,000	40,000	60,000
Egypt	40,000	40,000	40,000	40,000	50,000
Palestine	30,000	40,000	40,000	40,000	60,000
Jordan	60,000	70,000	70,000	70,000	70,000
Lebanon	#NV	#NV	#NV	70,000	#NV

Source: Ihs – World Development Indicators, authors' computations.

Notes: income concept is expenditures per capital in current USD; the computation assumes that the quintile IV income mid-point equals expenditure per capita and approximates quintile mid-points through income quintile total income share as reported by WDI; household numbers are derived from an average household size distribution assumption with the following scaling factors per quintile: I – 1.3; II – 1.2; III – 1.1; IV – 1.0 V – 0.8. For details of the affordability calculation, see Table 19 in the appendix. For notes on the results for Jordan, see text.

the fourth income quintile, in line with the typical distribution assumptions. This exercise produces lower household numbers for the lower income quintiles; however these households are considerably larger

- Clearly, many households in the lower quintiles will remain renters. Yet, this fact will not materially reduce effective demand for either new housing or renovation, which in the case of renters will be transformed into effective demand through rent payments to landlords. Also it can be assumed that most renters in the region will eventually become owners, since the rental sector is small and in most countries excessively regulated.
- WDI does not publish the mid-point income levels for the quintiles and thus provides no visibility of absolute income levels. We approximate these by taking the reported shares in total income and again assuming that the average income equals the fourth quintile mid-point. We then multiply the per capita expenditures with the average household size to arrive at a household income estimate.

Figure 12 in the appendix shows that the most extreme per capita income inequalities are observed in Morocco and Tunisia, followed by Palestine and Jordan. These countries, however, have quite different income levels. Rather than proceeding with definitions by quintile, we find it more useful to define annual income levels below USD 2,000 per capita as low-income and annual incomes per capita between USD 2,000 and USD 5,000 as middle income. Again these numbers are used without purchasing-power correction.

Low- and middle income group calibration. Based on this methodology we would propose to consider the first four quintiles in Morocco (ca.3.5 million households), the first two quintiles in Palestine, Tunisia and Egypt, also the lowest quintile in Jordan, as low-income. As shown in Table 19 in the annex as well as Table 8, with sufficiently long-term and low cost loans these groups can afford housing up to USD 40,000.¹⁵ We also emphasize that these calculations are crude first approximations and affordable debt-service-to-income ratios in particular for the lowest two quintiles with large families might be lower than assumed, implying lower housing affordability.

The middle income range would then comprise the third and fourth quintile in Tunisia, Egypt and Palestine as well as the second and third quintile in Jordan. Unfortunately, we have no income distribution data for Lebanon, for which we would assume a similar distribution as for Jordan. For these groups we see affordability up to a house price range of ca. USD 40,000 to 70,000.

Capital repair, extension and modernization finance would expand the target groups accordingly, but also invoke higher interest rate levels and shorter maturities than what is assumed for calibrating new construction.

¹⁵ The affordable house price levels obtained for Jordan in Table 8 are biased as a result of the large and stagnant average household size. This is, however, in itself the result of low affordability. For example, a young couple may want to move out of 6-person multi-generational household whose income taken together might afford a USD 60,000 house. Alas, the couple in isolation may be able to afford only a significantly lower price.

Access to finance and to housing finance.

Table 9 provides an overview of the outreach of financial systems in each country, and hence the limits of expanding a lending activity in the short term, especially among lower income groups, knowing that wealthy categories are typically 100% banked. Financial accounts include both commercial banks and microfinance institutions.

Table 9 Access to Finance Overview

% of adults (>15 years)	Egypt	Jordan	Lebanon	Morocco	Palestine	Tunisia
with a financial account**	13.7%	24.6%	46.9%	39%***	24.2%	27.3%
(Δ / 2011)	(+4%)	(-0.9%)	(+9.9%)	n.a.	(+4.8%)	n.a.
with a mobile account	1.1%	0.5%	0.7%	n.a.	0.7%	0.6%
with a mortgage outstanding	6.2%	14.9%	18.0%	n.a.	4.7%	10.7%

Source: World Bank FINDEX data base 2014 data; WB / AfDB for Morocco financial account data.

Notes: *Atlas method – \$ exchange rate averaged on 3 years and adjusted by differences in inflation rates; **Excludes refugees; ***2011.

Lebanon and Morocco stand out in the group. In Lebanon, the financial outreach continues to expand at a significant pace. There is no data regarding a similar phenomenon in Morocco. However here access to finance is probably on an ascending trend as well, as the mortgage-to-GDP ratio and the successful low-income housing finance programs suggest.

A more negative factor is that the use of mobile banking is very underdeveloped in the region and is much shallower for instance than in some Sub-Saharan African countries. This can constrain the broadening of access to finance for low income groups: mobile banking technology can make banking available in regions where bank branches are scarce, and offers low transaction costs.

Country evidence:

- **Morocco:** real GDP grew by 3.8 % p.a. on average between 2010 and 2014. Nevertheless, GDP per capita has been less dynamic since the financial crisis. Unemployment has fallen sharply in the past decades, but still remains uncomfortably high (9.7% at the end of 2014 vs. 22% in 1999). Morocco’s income distribution is the most unequal of the focus countries. As a result the potential low-income-household target group, despite the achievements of government programs, remains vast.

Price affordability is a restrictive factor for housing finance, although less so than in other MENA countries. If we assume a median income of DH 6,000 p.m. (EUR 550) for urban households (by extrapolating the latest known income survey) and a typical price of DH 11,000 for low/middle apartments in the periphery of large cities per square meter, the price/income ratio for a small unit in free market conditions would be between 7 and 8. This is an affordable level.

Inflation has been tame in recent years at between 0.5% and 2%. A sluggish economy however increases the demand for consumer loans by poorer households. Support for lenders through extensive public guarantee programs has also pushed mortgage lending. Figure 15 in the appendix thus reports an increasing loan market penetration. While in mortgage lending the increase in market penetration is supported by the availability of low-cost construction, the growth in consumer lending raises questions regarding sustainability.

Access to mortgages in Morocco may be expanded going forward by two additional factors. One factor is the creation, in 2010, of the postal bank Al Barid Bank, a retail bank that can rely on the extensive post office network (1,800 branches), and whose financial services – are largely used by moderate or low income households (mostly salaried). The second factor is the proactive involvement of the central bank and the Ministry of Finance in the expansion of financial access, for example through a Foundation for Financial Education.

- **Tunisia:** after a dip in 2011 (-1.8%), the year of the revolution, the economy has been growing again recently at a pace of 2.5-3% p.a. However, in terms of GDP per capita it has been stagnating since 2007. This growth is insufficient to lead to a decrease in unemployment, which has stabilized around 15% (not to speak of mass youth unemployment which is above 25%). Tunisia moreover has, after Morocco, the most unequal income distribution of the focus countries (see Figure 12 in the appendix).

House prices have been surging in the major cities since 2011, making the access to housing more and more difficult for lower income groups. This has increasingly limited the outreach of the main assistance program, FOPROLOS, the price limits of which have been updated a slower pace. It seems that even the low income housing market segment – defined as prices below EUR 30,000 – of the greater Tunis area is unaffordable for the 2 lowest income deciles and that mid-priced units (EUR 40,000) are only affordable to the 6th decile and above.

Inflation remains tame at 2.5%-3%, which in combination with the slow growth has given a boost to loan demand. Figure 15 shows that the number of borrowers per 1000 adults has risen by one-third since the crisis – an improvement of access to finance – but with a questionable timing.

- **Egypt:** the economy grew by a robust 5.5% on average from 2004 to 2010. This growth rate is still insufficient to create enough jobs for the large numbers of young people reaching the labor market. Figure 10 in the appendix shows that youth unemployment in Egypt at ca.40% is second only to war-torn Libya. In 2011 the GDP declined by 0.8%, and has been back on a growth path since, but at a reduced rate (+2% p.a.). In 2013, unemployment peaked at 13.5%, and the poverty level increased to over 25%. In addition, 20% of the population live close to an absolute poverty line. These figures generate a rather equal income distribution, however at very depressed income levels.

Low-income earners comprise 80% of the country's population – 'low income' under the current assistance programs defined as income below EGP 3,000 (USD 380). The average minimum formal house price is reported at 18 times the average annual salary. At subsidized interest rates, the affordability limit for home ownership is between 4 and 5 times the yearly household income. This price level can be met only in new towns where units start at EGP 160,000 (USD 20,000), but where additional transportation costs are imposed on households. The government programs target the 3rd to the 6th decile of the income distribution.

Inflation, which had declined to 7%-8% in 2011, is back to 10%-11% currently. This trend has caused braking skids in credit growth and access to finance penetration (see Figure 15 in the appendix and Table 9).

- **Palestine:** after 7 years of continuous growth, the Palestinian economy contracted by 0.8% in 2014, with a sharp contraction of 15% in the Gazan economy. Unemployment increased to 27% in 2014 – with 43% in Gaza and 17% in the West Bank. Particularly alarming is youth unemployment in Gaza which soared to about 60% in 2014. Preliminary estimates indicate that the poverty rate in Gaza increased from 28% in 2013 to 39% in 2014. The traditionally rather modestly unequal income distribution (see Figure 12) is thus likely to have worsened.

Both high formal housing prices and land price inflation in recent years have combined to price most Palestinians out of the finished housing market. The findings in Table 8 compare with the current lowest cost formal housing unit in the range of USD 70,000, which will only be affordable for the fifth income quintile. The market potential for lower priced units in the West Bank is therefore large.

Palestine still has significant gaps as far as access to finance is concerned (see Figure 15 and Table 9).

- **Jordan:** regional war and turmoil have weakened the Jordanian economy, and with no oil and inadequate supplies of water the vast majority of Jordanians live on less than USD 5,000 per year. Unemployment is high, especially in rural villages, where agriculture is a major source of employment.

There was considerable house price inflation before the financial crisis 2006-2008, and a second strong price increase in 2011 and 2012 with the beginning of the Syrian civil war. The lowest cost formal housing in urban areas now prices in the range of USD 60,000-USD 70,000. Affordability remains impaired through high interest rates and ultimately these house prices will not be affordable below the median income.

Access to credit in Jordan is fairly good compared to the remainder of the focus countries. However, as Figure 15 reveals, the number of borrowers declined with the global financial crisis. This could be related to concerns of the central bank regarding increasing household debt levels (see below).

- **Lebanon:** the Lebanese economy grew by only 1% in 2015, slowing down from growth rates of 2-3% between 2012 and 2014 and 8-10% between 2007 and 2010. The income disparities are deep, including within the non-refugee population. While we have no official income distribution data, UNHCR (2013) estimates that 25% of the Lebanese population live on less than USD 4 a day. There are significant regional inequalities with the North and the Bekaa Valley being the poorest regions. Unemployment rates are estimated at 10%-15%, disproportionately affecting youth and women.

It is thus likely that the income growth in recent years has disproportionately benefited the upper strata of the income distribution. A USD 70,000 house price will only be affordable to the upper middle class in Lebanon, yet such a house price will be hard to find in urban Beirut where apartments start at USD 100,000 – and hard to find even in lower-density coastal areas. Interest rates that are subsidized by the central bank as well as strong foreign demand have stabilized house prices in recent years.

Access to finance in the financial center of Lebanon is the best in the focus countries, even though very unequally distributed among different population strata. There are also signs of a correlation of increasing borrowing by households with a weakening economy and continuous high house price levels, which in combination raise stability concerns. The central bank reacted in 2015 with tighter underwriting standards, including for mortgages (see below).

2.4. Unmet Housing Demand, What Types of Finance Could Close the Gaps

Note: despite the extensive calibrations made so far – based on numerous assumptions as the statistical database in the region is extraordinarily weak – we are unable to answer the research questions in quantitative terms.

New finished housing: Financing finished housing could help to close the large quantitative gaps measured. We understand broadly these gaps in terms of needs, but it will be very difficult in all countries to close them at current affordability and formal house price levels. We can with relative certainty determine unmet housing needs, but only with great uncertainty unmet housing demand.

The ongoing lack of affordable finished housing translates into informal and progressive housing construction, as most prominently shown in Tunisia. Morocco and increasingly Egypt under the social housing program developed with the World Bank are addressing the formal construction gap more strategically with government programs tied to scale effects and thus a lower cost of formal housing. Such a cost anchor should open greater space for commercial housing finance.

Existing building extensions. Jordanian figures suggest that extensions are on average 30% cheaper than new housing per unit, and thus may expand the market one or two quintiles below the current formal housing barrier established by developers. Since construction solutions here are typically progressive, and low-income households can partly substitute lower affordability with own labor, this market segment might offer significant effective demand probably up to two income quintiles below the new finished housing level.

Existing building home improvements, capital repairs. The data situation is slim with regard to this type of investment. However, the Palestinian and Jordanian figures convince us that this segment is able to produce as much, if not more construction volume than new construction, and is generally highly dynamic. A large potential also seems to exist in Egypt as explained above. The affordability threshold is again much lower than in the case of new finished units or extensions – the Jordanian figures suggest average investments of only 20% relative to new construction, which will extend demand down into the two poorest income quintiles. Finally, providing lending on the basis of buying an existing low-quality property and taking out a loan to do capital repairs and extensions might push effective demand down one-quarter, e.g. from the fourth quintile into the median income range and below.

3. Housing Finance Supply

- Who is offering housing finance to the low- and middle-income segment?
- Which housing or special shelter programs have been devised and implemented?

The authors found it useful to organize the discussion into three subsections – on mortgage finance, on non-mortgage housing finance including home improvement lending and microfinance, and on other housing or shelter programs. We will discuss policy approaches to push mortgage and non-mortgage housing finance down-market in their relevant sections.

3.1 Mortgage Finance

The comparative literature about mortgage finance markets in MENA is extremely scarce. Between 2005 and 2007, before the financial crisis, Merrill Lynch published a book series on mortgage markets and mortgage-backed securities in the world that included a volume covering Middle Eastern markets. Since then, the World Bank has published a housing finance report as part of a broader ‘Financial Sector Flagship’ 2011 report, mostly from a policy perspective. Hassler (2011) also provides an overview of the markets from a policy and developmental perspective. To the knowledge of the authors there has been no in-depth comparative review from a commercial perspective.

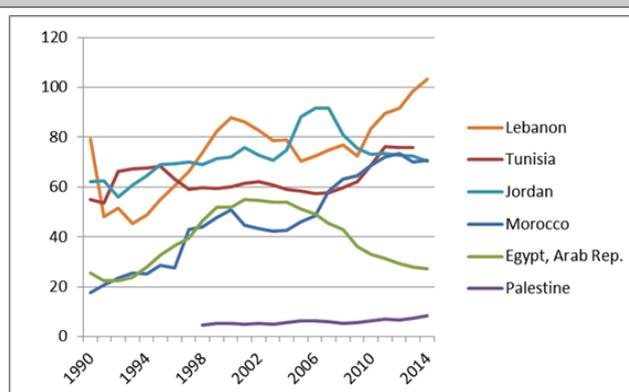
3.1.1. Market Development and Types of Lenders

Size of the market. Comparative mortgage market data are not officially collected by international agencies. Differences in definitions regarding collateral (‘mortgage’ vs. ‘housing’) borrower classes (retail vs. commercial) and loan purposes (construction vs. standing investment finance) make comparisons a tedious task. Figure 4 starts the calibration attempt with World Development Indicator data on total private sector lending, a definition that includes corporate and non-mortgage consumer lending.

There are in part significant discrepancies with central bank data.¹⁶ The growth dynamics of the private credit market relative to GDP is not uniform across the region. Lending has been steadily increasing since the 1990s in Lebanon and Morocco while it has been stagnating for a decade in Tunisia and Jordan. Lending growth in Tunisia only picked up after 2010. In Egypt, private sector lending peaked around 2000 and has declined since.

Table 10 overleaf on the right-hand side also presents our best estimate of the current scale of the mortgage market, which

Figure 4: Private Sector Credit Development in the Focus Countries



Source: World Development Indicators.
Notes: % of GDP. Data for Palestine likely underestimated, see text.

¹⁶ WDI data suggest under USD 1 billion in private sector lending for Palestine while central bank data indicate USD 3.7 billion, which would put the size of the credit market relative to GDP on par with Lebanon and ahead of Jordan.

in relation to GDP gives Lebanon the lead over Morocco, followed by Jordan and Tunisia. What can be said from anecdotal evidence presented below is that the household ('retail') mortgage market has been one of most dynamic elements of private sector lending in the focus countries, with exposures of lenders roughly tripling to quadrupling over the past decade.

Financial and legal conditions. Despite all the economic difficulties and the tumultuous Arab Spring, the region has experienced a general interest rate compression trend in the past two decades. Both foreign and local currency lending rates today are generally below the 10% threshold seen as critical for the development of mortgage finance. The exception is local currency credit in Egypt. Figure 17 in the appendix reports lending interest rates from WDI, which the authors deem as also broadly representative for mortgage lending.

Table 16 in the appendix analyzes interest rate conditions in local currency, which are driven by growth, population growth and inflation. Lending rates are broadly in line with the sum of their theoretical components. However, rates in Palestine are lower due to other severe constraints imposed on the loan market. Figure 17 sheds further light on this question and shows that Palestine features the highest spreads of lending rates over deposits. Spreads also remain high in Egypt and Jordan while they have precipitously declined, together with lending rates in Lebanon.

Legal reforms – from land titling via mortgage registration to consumer protection and foreclosure regimes – have contributed to the declining interest rate trend. That said, given the emerging nature of the market, the crucial test for many of the new rules will be during the first major downturn.

Types of lenders. Commercial banks are the dominant type of mortgage lender in the focus countries. Despite liquidity and funding issues, all major banks today offer this product, typically with central bank support. Specialized housing banks that historically came with specific long-term funding sources supported by government or monopolized savings for housing products have lost in importance. Tunisia is the exception where the public housing bank still plays a strong market role. Countries in the Mashrek have opened up to specialized mortgage finance companies as a competing charter to banks, with the intention to push supply down-market. Often these companies have ties to developers however and thus are conflicted. Egypt, with its so far tiny market, sees the highest share of finance companies in lending. Finally, Islamic banks with their idiosyncratic mortgage products have gained respectable market share in commercial banking in the region; the highest seems to be in Jordan with 30%. Non-mortgage lending, including that by micro-finance companies, is discussed in a subsequent section.

Growth dynamics. The mortgage sector will keep growing dynamically in all focus countries, driven by

Table 10: Private Sector and Mortgage Credit in the Focus Countries

	GDP	PS Lending	Mortgage lending			
	Million USD	Million USD	Million USD	% of GDP	% of PSL	of which to household
Morocco	107,005	75,537	20,053	18.7%	26.5%	70%
Tunisia	48,833	35,594	4,262	9.1%	12.0%	80%
Egypt	286,538	78,236	1,433	0.5%	1.8%	70%
Palestine	12,738	3,656	715	5.6%	19.6%	70%
Jordan	35,827	25,156	3,798	10.6%	15.1%	70%
Lebanon	45,731	47,242	9,880	21.6%	20.9%	70%

Source: World Development Indicators, central banks, authors' computations.

Notes: PS – private sector; source of mortgage sector data is central banks, World Bank; private sector credit data for Palestine from central bank; household ('retail') lending shares authors' estimates based on central bank data.

both housing finance demand and the supply factors identified, provided that (i) adequate market infrastructure (e.g. titling systems, foreclosure laws, credit information platforms, access to funding) continue to be developed or strengthened, and (ii) the political context does not create major obstacles, for instance by reducing the value of real estate as collateral or hindering the development of capital markets. Among the key supply drivers outside Morocco and Tunisia should be an ongoing interest rate compression in local currencies. This would be due to declining inflation and ample global capital supply at sufficient risk protections that will find its way into the region. Lower 'risk free' rates permit longer maturities and should tilt the balance towards less riskier local currency lending – from the borrower's perspective – even though the foreign currency lending share is likely to remain high in some countries (Lebanon, Palestine). However, high spreads will likely remain present in most countries due to remaining legal uncertainty, house price risk, cyclical and ad-hoc economic risk, funding instability of banks, and not least political risk.

Country evidence:

- **Morocco:** has the most developed housing finance market of the MENA region, both in terms of size and market penetration. Mortgage loans outstanding in 2014 amounted to ca. USD 20 billion or 19% of GDP. Mortgages are a major segment of private sector credit with over one-quarter of outstanding credit. Loans to households represent some 70% of this figure, a level generally met only in higher income countries; the remainder are developer loans.

Relative to other countries in the region, Morocco offers a positive legal and financial environment for mortgage lending, in particular a reliable – but incomplete – property registration system, as well as mortgage execution mechanisms that are more expedient (i.e. 12 to 18 months for the judicial process) than in many other countries. Amendments to the land law have been passed (law 14-07 of November 24, 2011) which make the initial registration of customary or informally held properties compulsory. This affects areas where the government, through the land administration agency 'Agence Nationale de la Conservation Foncière, du Cadastre et de la Cartographie' (ANCFCC), deems the formalization of rights a priority.

The supply of mortgage loans is comparatively concentrated. Only 7 banks have a significant offer for housing, and the 5 main lenders¹⁷ together have over 80% market share.

Retail mortgage lending in Morocco more than tripled between 2006 and 2014, helped by the general improvement in the affordability of loans, in particular in the 2000s, and the introduction of public guarantees. Since 2012 growth rates have slowed below the 10% level, limited partly by long-term funding constraints Tunisia: has a reasonably well-developed housing finance sector, which has been growing consistently following the diversification of activities permitted by the Banking Act of 2001. Residential mortgages outstanding amounted to TND 7.5 billion (EUR 3.5 billion) at the end of 2014. The total mortgages market represents 9.1% of GDP and 12% of private sector credit.

Two structural impediments are constraining market development: (i) the titling system, legally robust but affected by operational issues partial geographical coverage and a backlog of

¹⁷ Attijari Wafa, Groupe des banques Populaires, Crédit Immobilier et Hotelier, BMCE, BMCI

transaction recordings (an updating program, under judiciary control, is on-going but it is slow and results in freezing property transactions); and (ii) the lack of long term funding sources while the overall liquidity of the banking system is tight.

The supply of housing loans is distributed throughout the banking system, but only 5 banks account for two-thirds of the market. The 3 main players are Amen Bank, the state housing bank Banque de l'Habitat de Tunisie (BH), and BIAT. Two Islamic banks recently entered the housing finance market.

The residential mortgage market has grown in the 7%-10% p.a. range since 2012. Growth prospects are supported by the high construction activity, but dampened by the funding needs of the banks as well as political and economic risk factors.

- **Egypt:** mortgage lending is still a recent financial service in Egypt; with EGP 7.2 billion (USD 910 million), or 0.3% of GDP, the market in 2014 was very small. It had even shrunk during the post-revolution years from a level of 0.5% of GDP in 2011. Structural and contextual obstacles have stifled development of this market: the weakness of the land administration system resulting in the lack of clear titles and until recently high registration cost; the low efficiency of the foreclosure mechanism, and the lack of long term funding. However, some progress has been made over the years in addressing these issues. An overhaul of the cadaster and titling systems was undertaken in the early 2000s, with USAID support, and registration charges were reduced to near-nominal levels in 2007. Specific registration procedures have been developed for new urban developments, culminating in the power given to the government agency NUCA by the 2013 Real Estate Law to proceed to the legal regularization of property rights in new cities on its own initiative. Nevertheless, the legacy of persisting weaknesses still imposes constraints – for instance, even in newly developed areas, developers who buy land through installment sales often do not get a master title before selling individual units, which then themselves are often without proper titles.

Commercial banks hold 60% of the mortgage market. All the main banks offer housing loans as a small portion of their credit (0.3% in the case of the largest private bank, CIB, for instance). The remainder of the market is shared by 10 mortgage finance companies. In both cases, mortgage lending is regulated by the Egyptian Financial Supervisory Authority (EFSA). In institutional terms, however, the EFSA only oversees mortgage finance companies, while banks are supervised by the Central Bank of Egypt (CBE).

The mortgage finance company sector has gone through a number of changes despite its young age, with foreign investments (Qatar National bank, Crédit Agricole) and disinvestments (Société Générale). The main lenders are today Tameer, Tamweel Mortgage Finance (UAE), Amlak Egypt (a Sharia-compliant operation controlled by UAE interest with an IFC stake) and Egypt Housing Finance Company (initially formed with KFW, IFC and the Indian HDFC support, but now wholly-owned by Crédit Agricole). The leading company is Tameer, whose capital is held by public sector entities. Tamweel, also a significant player, is now a

subsidiary of the large and diversified real estate development group ORASCOM.¹⁸ Finally the MFC Tayseer is the financial arm of one of the largest Egyptian real estate developers.

Despite its small size, mortgage lending declined considerably, and basically came to a halt in the lower income segment of the market¹⁹ during the period following the 2011 revolution which saw a deterioration of the economy. To revive mortgage lending, a comprehensive reform of the assistance policy was initiated in 2013/ 2014 as well as a new and ambitious Social Housing Program (see below).

- **Palestine:** the mortgage market represents 5.6% of GDP. The specific contextual reasons largely explain this low level – from uncertainty about land rights to demolition risks, lack of national currency, to extreme caution of a banking system dominated by subsidiaries of foreign banks. More traditional obstacles exist in addition, such as the impossibility of evicting defaulting borrowers due to cultural bias related to the occupation, a lack of affordable housing solutions on the demand side, and generally economic and political instability. This translates into high lending rates and spreads (the highest in the focus countries).

Nevertheless, all major banks are participating in the market. A feature of the Palestinian market is that it is almost exclusively dominated by foreign banks – Egyptian or Jordanian. The main lenders are Bank of Palestine, the National Bank, Cairo Amman Bank, Arab Bank and Egyptian Arab Land Bank. A regulatory framework for mortgage finance companies, as well as for other real estate services, has been created by the Capital Market Authority (CMA).

A 2006 survey found banks to still have limited understanding of the mortgage process and operations, and with limited incentives to raise customer awareness of the product. In the meantime, capacity building and consumer education levels have been advanced through several initiatives.

Recently the markets' growth has been strong, with the central bank's definition of 'residential real estate' lending nearly quadrupling between 2008 and 2014. By 2014 that definition made up 70% of reported mortgages outstanding.

- **Jordan:** has a fairly large mortgage market by regional standards, with over 10% of GDP in outstanding mortgages at the end of 2014. Retail housing lending now makes up 70% of outstanding mortgages, putting the retail market into the range of 7% of GDP, on fourth position among the focus countries behind Morocco, Tunisia and Lebanon.

The Central Bank of Jordan (CBJ) in its Financial Stability Report 2013 nevertheless considers the ratio as low and in that regard points out the already high homeownership rate of 70% and to alternative housing finance mechanisms such as employer loans and direct loans from institutions, funds and co-operatives. Currently, about 50% of the portfolio outstanding is with three large banks: Housing Bank for Trade and Finance, Jordan Islamic Bank and Arab Bank.

¹⁸ ORASCOM is active in commercial real estate (tourism, retail) as well as residential real estate – after forming a company to specialize in affordable housing, it later reduced its involvement to keep a minority interest.

¹⁹ One reason was on the supply side: the retraction of land contracts by the government after the change of regime.

The Jordanian mortgage market has seen a quadrupling of retail housing lending ('Household Housing Credit Facilities') between 2005 and 2014. With a brief interruption during 2008-2009, the portfolio has grown continuously with double-digit rates. The dynamics in retail lending contrasts with commercial real estate lending, which has not grown since 2008. The retail market can be expected to continue to grow given that the country is one of the most stable in the region. However, the physical constraints – especially the lack of water – may put brakes on growth, as do increasingly political constraints – e.g. a political unwillingness to integrate more refugees – and financial constraints – e.g. an already high level of household debt and unaffordable house price levels.

- **Lebanon:** experienced strong mortgage market growth from outstanding of ca. 5% of GDP in 2004 to over 20% of GDP in 2014. This boom came in line with generally dynamic private sector lending, economic recovery and a real estate market boom. Again, the figure includes commercial real estate lending, which is particularly strong in Lebanon. Assuming a retail share of 70% would put the retail mortgage lending to GDP ratio into the 14% range, ahead of all other focus countries except Morocco. All large and mid-sized Lebanese banks offer mortgage loans.

The Lebanese market is comparatively mature and currently, following the considerable expansion of the past decade, positioned at the end of a credit cycle. Unless an initiative for greater down-market penetration is begun, it is likely in the coming few years that a consolidation of volumes will be seen. The growth prospects are moreover highly dependent on peace prospects in Syria, and the relief that peace could provide for the Lebanese economy.

3.1.2. Products, Pricing and Funding

Mortgage products and pricing. Historically, the very limited mortgage lending in the region was provided mainly by public housing banks. Denomination was in local currency and rates were fixed to maturity, an implicit requirement also of Islamic finance rules. Yet, the ability of banks to offer such a safe product depends on the environment regarding credit, interest rate and liquidity risks.

Risk conditions in the region historically did not pass this test, which has led to the both unaffordable and at the same time still risky local mortgage offers that we see today. In the focus countries we find relatively short maturities (Tunisia), high interest rate spreads (Egypt), and variable rate products (Tunisia, Egypt, Jordan), as well as foreign currency products (Lebanon) – with these often the main products offered in the market. The only country with a dominant long-term local currency fixed rate product currently is Morocco, and even here only after strong government intervention.

Local currency mortgage products that are 'inflation proof' (e.g. price-level adjusted mortgages) have not developed as they have been in e.g. Latin America and, occasionally, Eastern Europe. Rather, traditional nominal amortization methods are applied, usually the "French" model which leads to full amortization at legal maturity, which significantly adds to the interest rate burden of consumers, in particular when maturities are short. Prepayments are usually slowed down, and thus expected cash flows stabilized, through penalties.

Mortgage funding. Traditional bank funding sources dominate the funding of mortgages (deposits, interbank). This is partly the result of gaps in global bank regulations that do not require matched funding of long-term loans.

Nevertheless, in two of the six countries, long-term funding facilities permitting multiple bank access have been sponsored by international organizations and are today operated by banks. They fund today typically ca. 5% of the mortgage portfolio, in local currency lending apart from exceptional cases. Also, central banks support the mortgage market in a number of countries with long-term credit facilities. The bond market in contrast is very underdeveloped in the region. Even the liquidity facilities remain funded through institutional and official international loans and have so far not tapped the bond market as initially intended. The inertia in bond market development is partly due to an excess supply of deposits, as lending growth has been hampered by institutional constraints and economic instability (Lebanon, Palestine). The inertia is also partly due to financial instability, i.e. the absence of a yield curve in the presence of high inflation, lack of depth of institutional investors, regulatory and issuance cost disadvantages (Egypt, Jordan).

Half of the focus countries feature loan-to-deposit ratios above 100% (Jordan, Tunisia) or close to it (Morocco) and need to diversify their funding solutions from ad-hoc government programs. Morocco is the most advanced country regarding developing mortgage securities, with a securitization law in place and a covered bond law in progress.

Country evidence:

- **Morocco:** commercial mortgage interest rates are low – typical loan interest rates were around 5.5-6% in Dirham in 2015 – and public guarantee programs (see below) have further enhanced affordability. The public guarantee conditions have led to 75% of the outstanding loans being given at fixed rates, which is a mandatory condition for all loans supported by public assistance. Variable rate loans are now indexed to an average interbank rate. The benchmark is largely controlled by the central bank, Bank Al-Maghrib (BAM) that seeks to limit its volatility. The previously used benchmark was the short term Treasury bills rate.

Asset-liability mismatch of banks is a source of concern, given predominant loan maturities at fixed rates up to 25 years. Also, the loan-to deposit ratio is high – on average close to 100% at the end of 2014 (including savings-for-housing), which together with a strong reliance on sight deposits exposes banks to the risk of liquidity shortages and accentuates market risk. The largest bank by number of branches and customers, Al Barid Bank, launched housing loan products at the end of 2011, 18 months after its inception and may be putting further downward pressure on mortgage rates, especially if the bank can further mobilize deposits in the regions. BAM regulation relies on the Basle II ‘Pillar II’ approach that limits and monitors market risks through internal control procedures.

Morocco has the most developed capital market of the 6 countries, thanks to a diversified and relatively deep institutional investor base. However it still does not provide the volume of resources that would significantly reduce liquidity and interest rate risks of the mortgage system. Medium and long-term debt securities represent only 1.7% of bank funding. A mortgage securitization framework was developed in 1999. Its use has been limited so far; 4 issuances have been made. Historically, the reasons seem to have been the lack of urgent liquidity

needs on the issuers' side – apart from the specialized bank Crédit Immobilier et Hôtelier (CIH); the lack of analytical tools on the investors' side of the mortgage cash flow pass-through, and the difficulty in finding prices acceptable for both issuers and investors at large. The framework was modified in 2008 but besides making securitization structures more flexible (master trust, replenishment options) the reform mostly opened the instrument to new types of assets and did not foster its usage for housing finance.

The government remains engaged in a capital market policy that would increase the availability of long term finance. These efforts include (i) the development of covered bond framework,²⁰ the law for which is expected to pass in 2016, (ii) an on-going parametric reform of pension funds to ensure the balance between their liabilities and revenues, and (iii) the preparation of a real estate investment trust framework (although this type of instrument is not necessarily well suited to residential real estate, especially in the case of rental housing). A general problem for using capital market instruments to refinance mortgages are low prepayment fees, which are limited by law to 1% of the loan amount and may expose banks funded by fixed-rate bullet bonds – such as covered bonds – to negative maturity transformation risk.

- **Tunisia:** commercial loans are typically extended under floating rates indexed to the monthly average of the interbank market, to which a spread of 3%-3.5% is added. This leads to interest rate levels in the range of 7.5%-8% currently. Typical margins between lending and savings rates are fairly moderate for an emerging market (usually 2%-3%), which may be as much a reflection of the very stringent regulation on usury rates²¹ as of competition.

The Tunisian central bank (BCT) initiated a deep reform of banking regulation in 2011²². A feature of the regulations is the relatively tight usury provisions that apply both to deposits and credit. Central bank regulation requires that loans above 15-year maturity be extended with fixed rates. Given the lack of long-term funding, banks thus limit loan tenors to only between 10 and 15 years. The exception is the public housing bank BHT, which lends at fixed rate conditions up to 25 years thanks to state support.

With the floating rate pricing on shorter tenor loans, both market and liquidity risk is reduced for commercial banks. They overwhelmingly use deposits for funding; nevertheless, given a 111% loan-to-deposit ratio at the end of 2014, they face additional liquidity needs and thus market risk. These needs are primarily filled by special resources provided by the state – e.g. the FOPROLOS fund in the case of BHT – invested in share capital and only to a minor extent bank bonds.

BHT is an outlier because of its linkage with the government and its past as a savings and loans institution – hence it possesses a large base of 700,000 savings accounts. It offers contract savings-for-housing (CSH) products, the flagship specimen benefitting from a tax exemption that other banks' similar products do not enjoy, as well as a liquidity back-stop from the

²⁰ With the technical assistance of the World Bank and KFW.

²¹ Usury rules provide that rates must be capped at 120% of the average market interest rate prevailing during the last semester.

²² Focus was on the areas of governance, prudential requirements, deposit insurance and anti-money laundering.

government. The scheme includes a 4-to-6-year savings phase followed by the access to fixed rate loans up to TND 80,000 (EUR 37,000) at below market conditions (5.75%-6% currently).

BHT also offers non-state sponsored savings-for-housing schemes, which allow customers to borrow fixed rate mortgages at somewhat higher interest rates. In this segment, other players offer CSH products, partly in a more flexible manner, and BHT has lost ground here.

There is a crucial need for long-term and fixed-rate funding sources for mortgage lending in Tunisia. The bond market is far from providing the needed liquidity. It is not only relatively small, but also dominated by retail, as opposed to institutional, investors (social security pension systems have hardly any surplus to invest). A securitization framework was developed in 2001, but was very little used (3 or 4 issues, mostly by BIAT bank). This is hardly surprising given the investor base profile.

- **Egypt:** the predominant commercial mortgage product is marketed as fixed-rate. However, lenders generally reserve the right to adjust loan conditions in case of a significant change of its cost of funding. At still high inflation and real rates, market interest rates are typically between 13% and 17%. Subsidized loans to lower income segments have to carry true fixed rates.

Commercial banks in Egypt are very liquid and thus have no funding problems regarding the small mortgage portfolio. The loan-to-deposit ratio hardly reaches 45% overall, and banks are reluctant to pay extra costs for long-term funding. Banks are therefore clearly mismatched as mortgage loan tenors are typically between 10 and 15 years, although can go up to 20 years.

Despite the introduction of a legal framework for mortgage securities by the 2001 Real Estate Finance law, and the creation of the Egypt Mortgage Refinance Company (EMRC) with the support of the World Bank, the capital market hardly plays a role in the Egyptian mortgage system. EMRC is owned by banks and the central bank, and is regulated by EFSA. It lends to primary lenders to refinance mortgages meeting eligibility criteria. Its cumulative refinancing activity has reached about EGP 1 billion, with a little more of this amount still outstanding. The range of products it supports is more diversified than is the case generally for such liquidity facilities, and includes developer installment sales portfolios (see below), Sharia-compliant loans and low-income mortgages originated during the 2005-2010 assistance program. The political turmoil has resulted in deep bond market disruptions since 2011. It seems that bond issues would be possible again now, but at a cost – probably close to 12% – that is not likely to be attractive to lenders. The refinancing loans extended to primary lenders by EMRC continue to be funded through its capital and the original USD 10 million World Bank loan.

- **Palestine:** the territory has no own currency. Lending therefore has to be in foreign currencies, primarily in USD, followed by Jordanian Dinars (JOD) and sometimes in Israeli Shekels (ILS). Recently the share of ILS has risen, as Israeli interest rates have significantly declined. Jordanian banks such as Cairo Amman Bank provide loans in JOD. USD lending is usually at variable rates, formulated as Libor plus spread with semi-annual adjustment. This matches deposit remuneration conditions of banks and transfers both currency and interest rate risk to customers. Current USD rates lie between 4% and 6%. Lenders usually charge prepayment penalties of 1%-2% of the loan amount. Bank websites advertise USD loans for up to 30 years.

The main bank funding source is deposits. Foreign mother banks provide ILS and JOD liquidity, if needed. Even though bank lending has grown strongly in recent years, the loan-to-deposit ratio for Palestinian residents is still only 56%, which provides a strong disincentive towards bank bond issuance. That 2014 figure has grown, however, from only 29% in 2003. The dynamics point to the fact that Palestinian savings historically were mere deposit collection entities and financed activities primarily in foreign countries. To limit the exodus of domestic savings, the PMA has imposed a floor to the loan-to-deposit ratio.

In order to provide a source of long-term funding, primarily in USD, the Palestine Mortgage and Housing Corporation (PMHC) liquidity facility was created under a World Bank housing loan in 1997 – at a time when the 1993 Oslo Accord allowed the expectation of the emergence of a Palestinian state. In the meantime the international shareholders (IFC, KFW in particular) have left and the institution is today owned by developers and commercial banks. Almost 50% of its USD 42.4 million balance sheet (2013) is funded through equity. The company was never successful in issuing bonds, due to the unstable political situation that stifles the domestic capital market. The presence of a very long term IDA loan of USD 8.6 million is used to capitalize the guarantee activity of the structure.

However, banks use this facility very unequally: two-thirds of the USD 33 million interbank loan portfolio is in loans to two banks, Arab Bank and The National Bank. Nevertheless, PMHC in this way funds some 5% of the total mortgage portfolio in the territory. An additional housing finance conduit for international donor money has been established and has been in operation since 2010 – Amal (see discussion below).

- **Jordan:** 80% of the mortgage market is in local currency, JOD. The JOD features very low general interest rates, e.g. a 3.6% interest rate average over 2008-2014 vs. 9.95% for the same period in Egypt (see Table 16 in the appendix). Mortgage rates are priced in the range of 6%-7%.

Products have a 15-to-25 year tenor, with rates that are fixed only for an initial period of typically one year and are adjustable afterwards. Until 2013 this was based on the lenders' internal cost of funds, after which time rates have been based on JODIBOR. Thus true fixed-rate lending is absent, apart from the Islamic product market which the authors estimate at ca. 30%. Jordan has the most developed Sharia-compliant housing finance system in the region.

In the presence of a low inflation currency with limited interest rate risk in the past, JOD lenders are willing to lend long-term. Loan maturity in Jordan is typically 20-30 years, with differentiations made between different borrower groups to reflect differences in credit risk.

Contrasting with neighboring Lebanon and Palestine, the Jordanian deposit base is insufficient to fund and grow the domestic loan portfolio. The ratio of domestic loans to domestic deposits in August 2015 was 148%. Consequently, 'unclassified liabilities' which include bonds issued, reached 9% of total assets. Also, the banking system is a net foreign borrower. Much of the recent fluctuation in activity decline seen was funding driven, i.e. due to liquidity shortage and rising interest rates.

Under the regulations, real estate finance must not exceed 20% of banks' deposits. This constraint reflects the regulators' concern in part regarding the major liquidity issues, and in part the significant maturity mismatches that characterize mortgage portfolios. Apart from the portfolio ceiling, the prudential rules are fairly lax regarding assets-liabilities mismatches.

JMRC is a liquidity facility created by the World Bank in order to tap the domestic institutional investor base for long-term JOD finance. The facility by June 2015 had issued JOD 145 million in bonds and provided JOD 147 million in loans, which is equivalent to 5.4% of the retail mortgage portfolio.

- **Lebanon:** features a dual LBP and USD credit market, with ca. 60% of private sector credit in USD. However, this figure is down from 80% in the 1990s thanks to the strong interest rate compression trend in LBP that has encouraged LBP long-term savings. LBP rates have declined from 20% in 2000 to 7% in 2015. USD mortgages are usually priced in USD rates over Libor plus 3%-4% spread.

Bank funding in Lebanon is dominated by deposits, including 20% of deposits from foreign residents, mainly from Gulf state residents and diaspora. Even domestic residents hold 60% of their deposits in USD, taking the total USD share including foreign resident deposits to 70%. This preference keeps the USD lending share high. The system is extremely over-liquid, with resident loans only amounting to half of resident deposits. Therefore, while there are bank bonds outstanding, their funding role is insignificant (0.13% of total assets at August 2015).

Typically, loan maturity in private lending in Lebanon is 15-20 years while public loan programs channeled through the banks extend maturities to 30 years. This public support attempts to minimize fiscal outlays. Under the largest program the central bank permits banks to reduce their mandatory central bank reserves for lending purposes. Regarding other programs, the authors were unable to identify a public long-term financing commitment. We assume that support is through guarantees.²³

Interestingly, all housing loan offers on Lebanese bank websites advertise 'flexible payments'. That would suggest a cost-free partial or full prepayment option, which raises significant risks in particular for lenders offering fixed-rate products.

3.1.3. Underwriting and Market Penetration

Underwriting requirements. With the mortgage market in its infancy through most of the region and skimming the top of the income distribution, high formal underwriting requirements currently prevail. Yet, where public lenders are active in the market, or under the pressure of rising house prices, standards have sometimes been relaxed. Very often, civil servants enjoy less tight underwriting conditions than private sector employees, let alone freelancers.

²³ The first historic example of this approach was the 30-year loan created under the 1934 National Housing Act reforms in the United States with guarantees provided by the Federal Housing Association. Funding was 'secured' through Regulation Q, deposit rate ceilings. The model collapsed in the high inflation era of the 1970s.

Market penetration. The ‘natural’ scale of down-market penetration into middle- and low-income lending differs by maturity of market (after serving higher middle-income clients first); the level of minimum formal housing costs; the depth of formality of income (higher in Jordan and Lebanon than in Egypt and Tunisia), and income levels and their stability in these market segments.

In a number of countries, especially Lebanon, Tunisia and Morocco, access to commercial bank lending for households has been improving (see lhs of Figure 15 in the appendix). Lebanon leads with 100 borrowers per 1000 adults, followed by Tunisia, Jordan and Morocco with ca. 70. Palestine and Egypt lag behind. These figures indicate that formal bank lending in the region is still restricted to a small percentage of the household population, and that there is significant growth potential. Specific data for the mortgage market are available on an anecdotal basis (see below), but generally indicate mortgage finance to be limited to the upper middle class (4th household income quintile). Public credit programs are discussed further below.

Non-performing loans. Figure 16 in the appendix reports private sector lending NPL ratios as recorded by WDI. Default rates have declined in the region substantially since the early 2000s, due to improved economic performance and declining interest rates that have reduced debt service burden. Mortgage lending performance has been supported by the initial market skimming and persistent house price inflation. However household debt is starting to build up in some countries to levels that raise financial stability concerns (e.g. Jordan). Also, the cyclical increase in access and credit volumes as the economy weakened in the aftermath of the financial crisis and the Arabic Spring may be a harbinger of rising NPLs going forward.

Country evidence:

- **Morocco:** underwriting LTV is typically in the range of 75%-80%. That ratio rises to 90% for loans under a formal assistance program, 100% for FOGALOGÉ and FOGARIM guaranteed loans. 80% is the maximum LTV required by FOGARIM under the ‘Villes sans Bidonvilles’ (VSB) program that relocates slum dwellers. These programs are detailed further below. DTI is typically up to 35% of gross income (40% of net income for FOGALOGÉ).

Market penetration is already considerable. It was given an additional push through the creation in 2010 of the postal bank Al Barid Bank, which as in similar European developments is a new entrant into the lending market. The bank can rely on the extensive post office network (1,800 branches) and thus can distribute financial services easily among moderate- and low-income earners. Since almost all of its savers are salaried, Al Barid Bank may not extensively use the public guarantee program for earners of irregular incomes, FOGARIM. Al Barid Bank is accumulating portfolio fast and even permits LTV > 100%, i.e. it also funds the mortgage registration cost.

Through a circular of February 2013, BAM has established minimum fair practice guidelines to promote responsible retail lending. BAM is also more advanced than neighboring countries in the development of financial education, which is promoted through a foundation established for this specific purpose.

The reported NPL ratio (loans with arrears of 3 months or more) for total retail credit in Morocco (2013) was a relatively moderate 6.1%. Default rates under the public guarantee programs have recently increased (see below).

- **Tunisia:** underwriting LTV is 70%-85% typically, and 90% in the case of the FOPROLOS guarantees described below. Banks accept debt service-to-income ratio up to 40% of net income after taxes and social security payments.

Market penetration is in the medium range; the share of households with a mortgage loan is a moderate 11% (see Table 9 above). Usury rules technically serve to improve credit affordability, but also constraints supply. Nevertheless, the market still lacks of depth. It does not serve lower income groups, even allowing for the government assistance programs described below (managed mostly by the public housing bank BHT).

Nor are informal sector households which make up to 40% of the population, with a rising trend, catered for. These households are not necessarily poor: one-third of them are in the 3rd decile and above for income distribution.

The January 2011 revolution and the subsequent political unrest took a toll on the quality of credit. Impaired loans increased by about 15% each year in 2012-2014, to reach over 16% of the credit portfolios in 2013 (most of the NPLs being classified as 'beyond recovery' on the BCT scale). Impairments are especially high in the sectors of tourism, agriculture and real estate developments. Housing portfolios fare much better overall, with a 4.5% NPL ratio. The NPL performance is weaker in BHT's case – but the bank, more than other banks on average, targets lower-income customers.

- **Egypt:** mortgage lending is regulated by the Egyptian FSA EFSA. Banks finance typically up to 80% of the property value, mortgage finance companies often up to 90%. A distinctive feature of the Egyptian prudential framework is the cap on debt service-to-income ratios: 40% in general, and 35% for low income groups. Mortgages may not be extended on unfinished buildings, which is an impediment both to self-construction and the access of non-cash buyers to sales of units under development. An interesting, and original, innovation is the availability of credit default insurance: 2 companies offer this product, including the state-owned Misr insurance, the largest insurance company in the region. Another original and valuable feature of the Egyptian market is the existence of private companies that provide credit bureau services²⁴, as well as the verification of borrower incomes. This latter function is potentially of great importance for the expansion of housing finance towards informal sector households. Mortgage insurers are looking to enter the Egyptian market with the intention of allowing high LTV lending. The debt-to-income ratio accepted is up to 40% of net income. The Mortgage Finance Authority had initially set a lower ceiling of 25% for lower income borrowers, but this has been raised following the 2014 amendment to the Real Estate Law.

During the infancy phase of the market, bank mortgage lending has been focused on higher middle-income households. The share of households with a mortgage loan in Egypt is only 6%

²⁴ The main one being the 'I-Score' credit bureau.

(see Table 9 above). However, new credit information tools are starting to permit down-market moves: a private credit information platform was established in 2005 which allows the sharing of information between banks and non-bank lenders. The entry of mortgage finance companies supported by EMRC in combination with government assistance programs has created a new lower middle-income market segment. We do not have NPL figures for Egypt, but it is said to be very low. This is explained by the practice of using post-dated checks for paying mortgage installments, an efficient credit discipline method given the severe legal implications of letting checks bounce.

- **Palestine:** banks will typically finance up to 85% of the property. A differentiation of LTV by income status is common: PMHC for example accepts for the formally employed a loan-to-value ratio of 90%, but for the self-employed only a maximum of 70%. Given that lending is mostly in USD, debt-to-income constraints are unlikely to be binding.

PMHC is willing to fund 50% of gross income, which leaves little buffer for households in the case of USD appreciation. Given the legal difficulties in mortgage execution, banks will also typically require co-guarantors in addition to the mortgage.

Credit penetration is shallow due to both formal housing unit price levels and formal income requirements. The share of households with a mortgage is under 5%. A credit register, established by the Palestinian Monetary Authority (PMA) and available on-line, marks an important step in expanding credit.

However, banks cannot finance properties in Area C nor in Jerusalem, which is under Israeli control. This limits effective demand to Areas A and B (de facto urban) under full or partial control of the Palestinian National Authority. This limitation of the land market is driving prices up, in particular in Ramallah. Several Palestinian banks are operating under holding companies with large developers and, although other properties are being financed, essentially serve to acquire retail customers for their own projects. Bank of Palestine is for example affiliated to a developer and runs a subsidized mortgage product to help distribute Amal's properties only. The developer Massar owns 1.51% of the shares of The National Bank. Massar names PMHC as 'affiliated' on its website and together with The National Bank holds four out of seven board positions at the refinancing agency.

Surveys in the past, e.g. quoted in World Bank (2011), have found that consumers and banks alike in Palestine have difficulty with basic financial concepts and that these technical deficiencies hamper greater market growth and down-market penetration.

The self-targeting of the market to higher income levels and support by rising house prices has kept default rates very low. The central bank reports a mortgage portfolio default rate of 1.8% for 2013. Defaults rates are higher for self-employed vs. salaried employees. A risk driver could be a USD appreciation vs. the ILS; however for the time being the ILS is moving closely with the USD.

- **Jordan:** the market concentrates on formal public and private sector employees, which make up 70% of the Jordanian household population. Finance is also advertised for the self-em-

ployed, however probably only those with documented income sources. Lending to expatriates is a significant market. The share of households with a mortgage loan is considerable, at 15%.

Despite their often lower income levels, public employees enjoy significantly better underwriting conditions with commercial banks. These privileges are in the case of Cairo Amman Bank as follows: 100% loan-to-value for public vs. 85% for private sector, 30 years' maturity for public vs. 20 years' for private sector, 50% payment-to-income ratio for public vs. lower ratios, according to a scale, for private sector, and finally the absence of additional guarantor requirements for public sector employees. The self-employed are treated more rigidly, with lower maturity/higher amortization loans. The Jordan Ahli Bank, for example, lends for 25 years to those private-sector salaried but only for 20 years to the self-employed. Property and life insurance are a general requirement. Some banks impose maximum loan amounts to limit exposure.

There are usually no minimum income requirements or if so they are indicated as being very low (e.g. THB only JOD 250 or USD 360). Nevertheless, the actual mortgage market penetration is limited by the strong house price increases in recent years. The price increases have contributed to the strongly rising household debt levels – the household debt to income ratio increased from 40% in 2008 to 63% in 2014 in just 6 years! Loan-to-value ratios have also risen – 73% on average for 2014 originations, up from 61% in 2008 – and are watched carefully by the central bank. Finally, the high debt-to-income ratios look dangerous in the context of variable rate loans. Because of these issues, currently the market does not reach further down than to the third quintile.

- **Lebanon:** Bank lending outside public programs is extended mostly to salaried employees. However, due to the relatively high income formality levels in Lebanon, the share of households with a mortgage loan is relatively high (18% according to data presented in Table 9 above). From the bank websites reviewed it was unclear whether there are offers for freelancers, e.g. those with official income tax documents. A typical requirement for salaried borrowers is 2 years in employment. Income requirements can be rather moderate, e.g. Bankmed, a mid-sized bank, requires USD 800 per month for singles and USD 1000 for couples for its USD product – but the requirement can be also much higher. Life insurance is an additional requirement.

Borrower equity requirements used to be very high but have become more relaxed as house prices in Lebanon have increased. Equity required will typically go as far down as 15% for private lending and to only 10% for public loan programs. Down-payment requirements are generally higher for USD than LBP lending to create a cushion against devaluation risk; for instance Bankmed requires 25% for USD and only 20% for LBP. Banks moreover apply appraisal haircuts over purchase prices. Banks also demand property insurance.

Despite the spectacular growth of the market, the current down-market penetration is considered as low ('upper middle class'). The strong price increases of the late 2000s imply that a large proportion of growth is in loan volume and not loan count.

Very low default rates are reported for Lebanese mortgage finance, e.g. 0.23% by Global Housing Indicators (Habitat for Humanity) for 2010. While we question such low levels, performance in the past 10 years has been supported by rising house prices and an improving economy. Defaults must be expected to rise with the currently unfolding end of the house price boom.

3.1.4. Public Assistance Programs

Global interest rate subsidies. Interest rate subsidy programs do exist or have existed at some point in all focus countries. The exception is Palestine, which lacks an own currency and suffers from fiscal constraints that prohibit subsidizing autonomously long-term funding. The typical goal of subsidizing interest rates so far is not to overcome formality constraints, or even to push down-market, but to assist affordability of existing formal lending to the middle class. The main motive is high interest rates on local currency loans, in particular on those with fixed rates. Subsidy programs are often tied to the condition of fixed interest rates and buying down interest rates. As an example, in Central and Eastern Europe one may expect public subsidy programs to decline given the fall in interest rates below the typical critical threshold in the 5%-7% range.²⁵

Public special banking and loan/guarantee programs. Classic public housing banks are in decline in the region, playing a major role today only in Tunisia. Special loan programs run by public banks exist in a number of focus countries under subsidized loan terms, reduced underwriting requirements and reduced fees. However, they are typically subscale and do not go further down-market than the middle quintile. Routinely, civil servants, who often have low, but steady, incomes are provided with special housing finance terms by public banks.

Country evidence:

- **Morocco:** any mortgage loan benefiting from state support requires offering long-term fixed interest rates.²⁶ To induce banks to lend to lower-income and informal-sector households segments that imply higher risks and time-consuming due diligence, the government has established a special guarantee fund, FOGARIM, which started operating in 2004.

Another scheme, FOGALOGÉ, was established in 2009 to guarantee loans to civil servants, other middle class households and non-resident Moroccans, with the aim of filling the gap between low income and high end segments.

²⁵ The rationale for interest rate subsidies in local currency lending is the so-called Tilt effect caused by the inflation component of nominal interest rates. Under high inflation levels, the real debt service when charging the full nominal interest rate becomes 'tilted' towards the initial years of the financing, rendering it unaffordable and enforcing lower loan-to-value ratios. In principle, therefore, interest rate subsidies would have to target only the initial years, since both nominal incomes and house prices increase with inflation. In practice, however, such subsidies are more than often given for the life of the loan and hence are generating excessive fiscal costs. This contributes to the severe rationing of such programs, often to socially preferred target groups such as civil servants.

²⁶ This condition has been borrowed from French mortgage insurance practices, which in turn borrowed it from the U.S. The introduction of the public U.S. mortgage insurance system in 1934 was, however, accompanied by statutory deposit rate ceilings that permitted the banks to lend at very limited interest rate risk. This system survived until the high inflation phase of the 1970s. Morocco still practices interest prohibition on checking accounts.

Both schemes²⁷ are housed by an umbrella fund, Damane Assakane, run by the Caisse Centrale de Garantie (CCG), a state-owned entity regulated and supervised as a special financial institution by the central bank.

By the end of 2015 FOGARIM had extended guarantees to about 130,000 borrowers since its inception, and FOGALOGÉ more than 20,000. Total guaranteed loans amounted to DH 19.4 billion at the end of 2015 in the former case and DH 7.4 billion in the latter case (EUR 1.9 billion/EUR 700 million). 25% of new mortgage originations are covered by the two funds.

In terms of performance, the system has fared well. NPL rates among FOGARIM guaranteed loans stood at 8.5% at the end of 2014, and 6.1% in the case of FOGALOGÉ. Also, the cumulative portion of loans for which the guarantee had been exercised was about 5.1% in the case of FOGARIM.²⁸ FOGARIM default rates are mainly significant in the case of credit to former slum dwellers, to whom banks applied more conservative lending standards, leading after a few years to the reduction of activity in this segment. Default rates have also risen among high-LTV loans which were common during the house price boom. In reaction, some banks have started to request higher down-payments from FOGARIM clients. The public housing bank BHT, in the absence of adequate hedging opportunities, has become the sole long-term fixed-rate lender.

Public assistance through the private credit system goes mostly through a fund – FOPROLOS – financed by a special 1% contribution on wages and managed by BHT. FOPROLOS provides loans to salaried households earning between 1.5 and 4.5 times the minimum wage (roughly EUR 200 to 650 per month), at concessional conditions – up to 25 years, fixed rates from 2.5% to 4.5%, depending on income level. FOPROLOS' activity has been declining – supporting only 300 to 400 units per year recently. This is due to a combination of factors, including the focus on developer-built housing – as opposed to self-construction – the lack of affordable housing supply driven by price increases in this market segment and the exclusion of non-salaried borrowers. The government is currently considering an overhaul of the scheme.

Besides FOPROLOS, there is a public fund to support housing renovation, FNAH, also managed by BHT. FNAH provides loans to households earning less than 3 times the minimum wage (about EUR 450 per month), for amounts up to TND 5,000 (EUR 2,300) at concessional conditions (0% to 5% on a 5-year term). The funding available to FNAH, based on local property taxes, has been shrinking in the last few years – intervention capacity in the range of TND 15 million (EUR 7 million) a year.

- **Egypt:** the Egyptian government created the Housing and Development Bank in 1979 to channel long term funds at below market conditions into affordable housing investments by the public sector. The bank, which controls the largest mortgage finance company, Tameer, has historically played a pivotal role in the distribution of housing subsidies. Until recently, only banks benefited from a Central Bank of Egypt (CBE) subsidized lending program (see below).

²⁷ Separately from this, there is another guarantee fund for housing finance, FOGALEF, dedicated to the staff of the Education Ministry.

²⁸ Source: Caisse Centrale de Garantie Habitat & Francophonie conférence, Dakar, October 2014.

Mortgage finance companies were excluded unless they could indirectly access this source of funding as subsidiaries of banks. CBE is now going to offer them access to the program through the mortgage refinancing facility EMRC.

In 2005, a Guarantee and Subsidy Fund (GSF) was set up with the dual purpose of providing subsidies to low income households and a 3-month repayment insurance in case of the temporary inability of borrowers to service their mortgages. In practice, the guarantee component, which only benefitted specialized mortgage finance companies, remained ineffective and was discontinued, while the subsidy program remained small – partially due to a lack of adequate housing supply.

In 2009, an Affordable Mortgage Finance Program (AMP) was launched that provides credit-linked, demand-side subsidies through GSF with a 10% down-payment condition, for the purchase of a new or existing house. The program aimed at improving the subsidy allocation system, and at serving more low income households (income as low as EGP 1,000, or USD 110 and up to EGP 2,500, or USD 280²⁹), i.e. households in the 2nd to 6th deciles of the income distribution.

A comprehensive reform of the housing assistance policy was initiated in 2013, including a new and ambitious Social Housing Program aimed at building 1 million new housing units over 6 years. This plan was accelerated by a presidential decision in February 2016 to build 650,000 units within a little more than 2 years. In addition, CBE launched a LE 20 billion (EUR 3 billion) program for low income housing finance in 2014, which should fund around 200,000 mortgage loans. Concessional funding at a rate between 3.5% and 7 % is made available to banks to finance housing loans to low and middle market segments, defined as housing that cost less than EGP 500,000 (about USD 55,000), with a new bracket of up to EGP 950,00. Mortgage loans must be extended at fixed rates of 7%, 8% and 10.5% depending on borrowers' incomes– in all cases deeply below market conditions. This subsidized funding can be combined with the AMP up-front as well as buy-down subsidies (EGP 15,000) for the lower income segments as shown in the summary Table 21 in the appendix. We note that the CBE program supports lending to informal sector households by accepting bank records as a substitute for income documentation.

Fourteen banks (out of 39) have so far signed a protocol of participation in the new program. Charged with allocating about 150,000 subsidies a year there was a need to change the operational arrangements for delivering subsidies and reduce the long waiting lists that have built up. The new policy is implemented by a newly created housing policy authority, the 'Social Housing Fund', in charge of designing strategies for affordable housing and its finance, coordinating the various government agencies involved, as well as managing implementation instruments and decentralizing the administration of subsidies.

²⁹ Based on the exchange rate from Dec. 31, 2016

- **Palestine:** The Palestinian National Authority (PNA) is operating under tight budget constraints and extremely volatile budgets, which does not permit public housing finance programs beyond very low-income rental housing. There is also no local currency permitting the central bank PMA to provide subsidized long-term funding, as in some other focus countries.

The mortgage refinancing company PHFC, which in the initial stage was co-owned by the government, can maintain a certain level of subsidies through the IDA-funded portion (0.5%, USD) of its balance sheet. Commercial banks offer subsidized interest rates for projects of affiliated developers, which are likely commensurately overpriced. There is no income targeting of such bank policies.

PMHC, the parent of the mortgage refinancing company, also runs a mortgage guarantee program independently capitalized – PIF. Given the prevailing uncertainties and the low efficiency of the mortgage rights, the insurance coverage is in demand by banks and this product has been relatively more successful than the refinancing product. This is however not a socially targeted program, but a protection against general credit risks.³⁰

Affordable housing finance has been a goal of several international donors' programs. The project 'Affordable Mortgage and Loan Corporation' (AMAL) was launched with the support of OPIC, IFC and DFID in 2010 to channel donors' long term funding complemented by capital from the Palestinian Investment Fund (PIF). The providers of funds benefit from a partial guarantee from donors. To the knowledge of the authors, the scheme, which has been devised on the basis of a very complex structure and which bypassed PMHC for legal reasons (OPIC is not allowed to fund entities with no significant US participation) remains ineffective so far.

Since PMHC is today tied to the large developer Massar, with involvement in similar large scale and upscale housing construction, one can wonder whether both schemes serve de-facto for the upper segments of the mortgage market.

- **Jordan:** given the traditionally rather low JOD interest rates, there is no universal interest rate subsidy scheme. However, there are several public programs benefiting special groups. In these programs, Jordan tends to tie low-income housing finance to new housing built under specific projects, here with greater direct government involvement.

The 'Housing Loan Subsidy' program initiated in 2000 benefits government employees. A similar soft loan program with down-payment support targets teachers. The 'Decent Housing for Decent Living' program that tried to sell housing built on government land to low-income households failed because of inter alia high interest rates charged in this particular case by commercial banks. This prompted the government to introduce interest rate subsidies for the program in 2014.

- **Lebanon:** the central bank BDL currently runs a heavily subsidized housing loan financing scheme benefiting what Lebanon defines as 'middle-' (up to USD 500,000 loan value) and 'low-income-' (up to USD 180,000 loan value) markets. Properties must be the first residence

³⁰ The legal system does allow two ways to foreclose, a traditional judicial route, and a supposedly more expedient out-of-court proceedings that involve the land administration. In practice, mortgage enforcement is limited by its high political sensitivity, given the parallel made between repossessions and properties taken over by Israel.

of the borrower, which excludes inter alia second homes and invites intra-family arbitrage for subsequent homes purchased. The program was initiated in 2009 and was declared as temporary in order to support prices falling too strongly after the bubble that built up after 2005 burst. It has now been extended to the end of 2016.

There are two interest rate subsidy mechanisms: BDL Circular 185 permits the banks to reduce their unremunerated BDL reserves by 60% of the loan amount. For those with limited reserves, BDL Circular 313 permits direct BDL lending to banks at 1% against 60% of the mortgage, which is posted as collateral to BDL. These subsidies are given for the life of the loan for maturities up to 20 years. Lending has to be made at predetermined subsidized rates and without closing costs (appraisal fees are permitted). Current pricing is regulated as variable rate based on 40% of the 1 year T-Bill rate plus a 3.3% spread. The resulting interest rate in February 2016 was 5.3%, compared to typical bank lending rates that start at 8%. At current deposit rates, which fund the remaining 40%, banks pocket a 3%-3.5% lifetime spread on the mortgages over average cost of funds of ca. 2%. Lending to the military and judges is even more heavily subsidized through higher BDL financing ratios.

The targeting of the BDL programs is very poor, in particular after down-payment requirements were tightened in 2015 to 25% without offering support for equity build-up. The Lebanese government offers additional subsidies for 'low-income' households to smooth the debt-service-to-income profile. The Institute of Public Housing (IPH) finances the accumulated interest payments on BDL-refinanced loans with a maximum loan amount of USD 180,000 (property not exceeding 200 m³ living area). This scheme arrives at a 30-year maturity, where the first 15 years are a principal-only loan funded by the banks. IPH pays the interest on the principal to the bank and households repay the interest-only loan from IPH between year 16 and year 30. IPH funded properties and mortgages are moreover exempt from registration cost and stamp duties.

3.2. Non-Mortgage Housing Finance

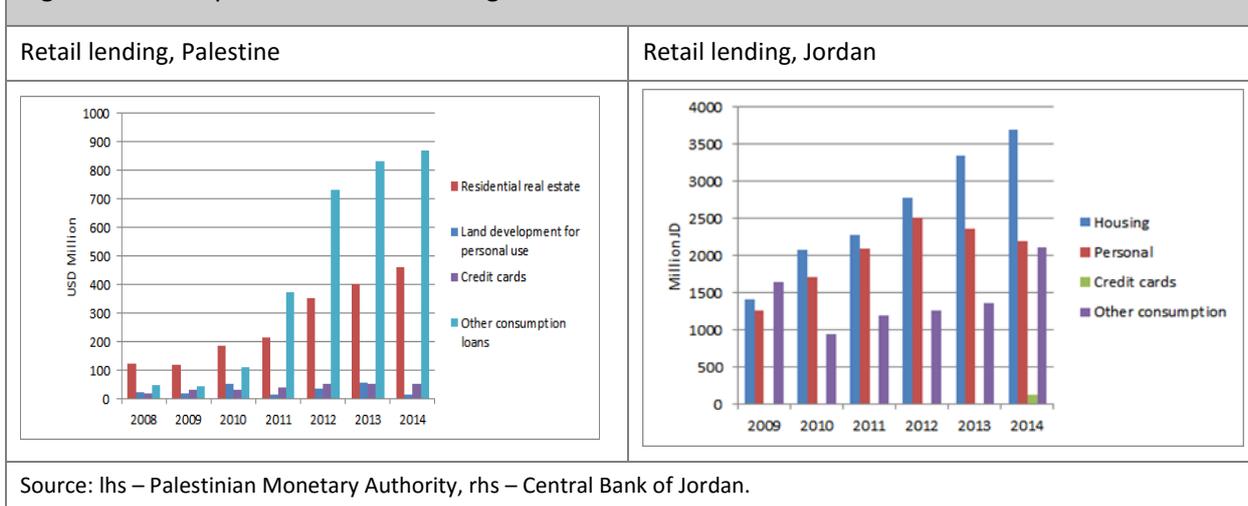
3.2.1. Market Development and Types of Lenders

Market Development, Types of Lenders. Non-mortgage housing lending plays an important role in housing finance in the region and in the authors' general assessment is likely to rival, if not in some cases exceed, the mortgage market in size.

- Before the emergence of mortgage finance, new homes in the finished housing market were routinely purchased through installment sales from developers, especially in Egypt. The dominance of this form of type of leasing contract issued by corporations (developers) is slowly declining with the emergence of mortgage lending.
- Anecdotal evidence suggests that other non-banks, such as corporations and government as employers as well as social security institutions, continue to play a role separate from the financial system as housing loan providers for finished homes – often outside mortgage finance.

- A non-mortgage renovation, extension and small volume purchase (existing homes, land) housing loan market is emerging. Commercial banks in the region seem to be interested in this mid-term lending segment as it helps in overcoming the formal housing cost barrier and in attracting customers. There are also indications that a significant share of the growing unsecured bank lending (consumer credit) market supports housing investments. Vice-versa, unsecured loans contracted for housing investments can in fact be used for other purposes (as happens in Tunisia).
- Finally, the microfinance industry has diversified its lending and beside SME finance offers housing finance products in a number of jurisdictions, especially in Lebanon and Jordan.

Figure 5: Development of Retail Lending in Selected Focus Countries



Calibration of the market. Much of the non-mortgage housing loan market is unfortunately below the radar of the already scarce and often undifferentiated official financial market statistics. We therefore report available anecdotal evidence. For a broad idea of the scale of the market we have produced a simulation based on distribution and financing assumptions of different types of housing investment.

Data on developer, employer and social security lending for housing purposes are not centrally gathered and published. We have occasionally found bank consumer lending data published by the central banks. The market seems to be growing dramatically throughout the region, in what could be seen as an echo effect of the take-off of mortgage finance as banks seek new promising lending areas. Figure 5 on the left-hand side gives an impression of the dynamics of consumer lending in the Palestinian case, where the outstanding in 2014 has risen to double the level for residential real estate loans. The right side shows that consumer lending in Jordan has been developing almost as dynamically. Consumer lending dynamics are also strong in Tunisia, where the regulator has tried to curb excesses. It is typically unobservable which part of consumer lending is used for housing purposes, but it is likely that barriers to formal mortgage lending are contributing to its growth. For a general overview of non-bank credit volumes as reported by the WDI, see Table 11 – noting that most non-bank lending continues to be in leasing.

We discuss available information on microfinance volumes case by case. Here we have a relatively well developed statistical database with mixmarket.org. Figure 6 following provides an impression of the

partly stormy market dynamics. We suspect with regard to the WDI data that microfinance in some cases is included in bank lending and in others in non-bank lending.

Country evidence:

- Morocco:** according to the World Bank around 15% of retail housing loans outstanding, i.e. some DH 25 billion (USD 2.6 billion), are medium term loans. These can be considered as financing of renovation or extension of existing housing which are offered by a number of banks. In addition, an unknown proportion of consumer loans may be used for housing purposes. Al Barid Bank has launched a program of housing loans, including small loans that sit between traditional mortgages and microfinance.

The Moroccan microfinance sector is by far the largest in the MENA region – 1,300 branches, slightly over 800,000 customers – which puts it ahead of Egypt in this regard. The sector is governed by a 1999 law that defines the type of entities, the licensing conditions and types of products. MFIs must take the legal form of ‘Association de Microcrédit’ (AMC) – i.e. non-profit and non-deposit taking organizations, which are affiliated to a nationwide federation of micro-credit agencies.

Since 2006, AMC has been supervised by the central bank, Bank Al-Maghrib (BAM). Confronted with high NPLs at the time, BAM immediately triggered a consolidation that reduced their number to about 12 entities. The 3 main AMFs (Al Amana, Attawfiq, Albaraka) now have more than 80% market share. Figure 6 shows the strong impact that the BAM measures had on the portfolio dynamics. Nevertheless, according to mixmarket.org, microfinance for housing in 2014 was offered by 7 Moroccan MFIs, up from only 2 in 2010.

- Tunisia:** unsecured credit provided by banks and labelled as housing improvement loans amount to TN 7.36 billion (about USD 3.3 billion) in outstanding (end of 2013), i.e. roughly equal to the mortgage portfolio. In part these are consumer loans in disguise, contracted by borrowers because of their longer tenor, and promoted by banks as a way to avoid the restrictions imposed by the Central Bank (BCT) intended to dampen the “exuberant” growth of consumer credit. For this reason, BCT re-classified housing improvement loans as consumer credit in 2011, and reduced their maximum tenor from 7 to 5 years in 2014. Still, it is likely that some housing improvement loans are effectively used for their stated purpose.

Table 11: Bank and Non-Bank Lending in the Focus Countries

	Bank and Non-bank Private Sector Credit					
	2014, % of GDP			2014, current USD, millions		
	Banks	Non-banks	Total	Banks	Non-banks	Total
Morocco	70.49	0.10	70.59	75,431	106	75,537
Tunisia	71.93	3.81	75.74	33,803	1,791	35,594
Egypt, Arab Rep.	27.30	0.00	27.30	78,236	-	78,236
Palestine	28.70	#NV	28.70	3,656	#NV	3,656
Jordan	70.13	0.09	70.22	25,125	32	25,156
Lebanon	99.20	4.10	103.30	45,367	1,875	47,242

Source: World Development Indicators, authors’ computations.

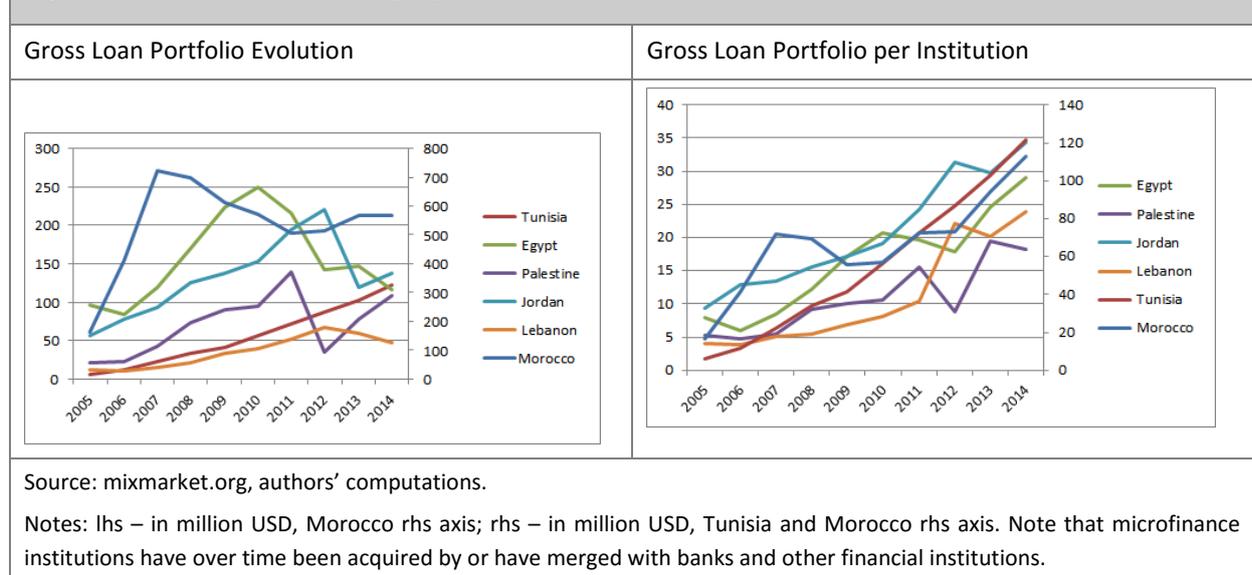
Notes: Palestine central bank data, non-bank data not reported.

Tunisia has at least one significant non-bank lender. The largest micro-finance institution, ENDA Inter-Arabe, part of the international network ENDA Tiers Monde, is a reputable and competent entity rated A- by Planete Rating. ENDA has a portfolio of over 250,000 customers, 1,200 staff and offers housing loans. Recent charter and regulatory changes have given a stimulus to newcomers. 5 MFIs have been licensed since 2013, with most linked to international groups: Taysir SA, Microcred Tunisie, Advans Tunisie, Assad and Centre Financier des entrepreneurs (CFE). ENDA remains the only institution offering a product for housing however.

- **Egypt:** the non-mortgage housing sector in Egypt, when developer installment sales are included, must be many multiples the size of the still tiny mortgage market. Commercial banks routinely offer home improvement loans as personal loans. The scale of this market is not reported.

The microfinance sector remains largely underdeveloped in Egypt. There are over 400 MFIs, but the number of borrowers hardly exceeds 1 million. Of this number, the largest MFI, Alexandria Business Association, alone serves 270,000 customers and has USD 70 million in loans outstanding. ASBA, DBACD and Lead Foundation have the next largest portfolios. Mixmarket.org identifies 3 MFI with housing loan offers for 2014, yet apparently none of the above four largest MFI offers a housing product. A November 2014 presidential decree set out the regulatory framework for microfinance. One of the provisions of the new system is to allow MFIs to lend up to LE 100,000 (EUR 12,000).

Figure 6: Microfinance Industry Dynamics in the Focus Countries



The regulations do not allow MFIs to lend for non-business related purposes. There is therefore no explicit micro-credit product for housing. However, a portion of micro-loans is considered as being used for housing improvements

- **Palestine:** there is a very dynamic bank consumer finance market as reported by the central bank. Also, commercial banks, according to websites seen by the authors, routinely offer

housing loans for non-registered properties and for registered properties without mortgages. The scale of this market is not officially reported.

The volume of the Palestinian microfinance outstanding is reported by mix-market.org at USD 192 million. This figure yields an impressive 5% of total private sector credit, the highest of the focus countries. The four largest microfinance lenders with loan portfolios each in excess of USD 10 million were verified by the authors as offering housing loans. According to mixmarket.org, a total of 8 microfinance institutions offer housing loans, which would be a majority of institutions.

- **Jordan:** the central bank of Jordan considers that a large share of housing finance is channeled through non-mortgage non-bank channels, e.g. employer loans, loans by the social security system and other institutions. Much of this seems to be outside the formal financial system; the WDI figures reported in Table 11 give only a low non-bank share of private credit. Commercial banks in Jordan offer non-mortgage housing loans for all purposes.

The Jordanian microfinance market alone had JOD 160 million (ca. USD 230 million) in loans outstanding at the end of 2014, 1% of total private sector credit. Microfinance activity doubled between 2011 and 2014 (see Figure 6). Housing is an emerging product in microfinance. Leaving aside the large public Development Employment Fund, where a housing offer could not be verified by the authors, of the top 4 non-profit lenders by portfolio size, 3 offer housing products. The exception is the Micro Fund for Women. Of the other 3 for-profit institutions none, so far, offers a housing product. In total less than a third of institutions offer the product.

The legal status of the 11 microfinance institutions listed in MoPIC (2012) is extremely diverse, ranging across non-profits, for-profits, banks with a microfinance license, donor, and the large governmental agency Development Employment Fund.

Table 12: Indirect Calibration of Non-Mortgage Housing Lending Volumes and Market Segments in the Focus Countries

Million USD	Residential Mortgage					
	Outstanding	New Building	Extension	Improvement	Purchase	Lar
Morocco	14,037	16,483.8	745.6	1,301.3	1,316.4	
Tunisia	3,410	3,503.8	158.5	276.6	279.8	
Egypt	1,003	1,177.7	53.3	93.0	94.1	
Palestine	501	587.7	26.6	46.4	46.9	
Jordan	2,658	3,121.8	141.2	246.4	249.3	
Lebanon	4,940	8,121.6	367.4	641.2	648.6	

Million USD	Other housing loan outstanding					
		New Building	Extension	Improvement	Purchase	Lar
Morocco	4,706	1,282.1	347.9	2,125.5	614.3	
Tunisia	1,143	311.4	84.5	516.3	149.2	
Egypt	336	91.6	24.9	151.9	43.9	
Palestine	168	45.7	12.4	75.8	21.9	
Jordan	891	242.8	65.9	402.5	116.3	
Lebanon	1,656	451.2	122.5	748.0	216.2	

Million USD	Total housing loan outstanding					
		New Building	Extension	Improvement	Purchase	Lar
Morocco	24,758	17,765.8	1,093.5	3,426.7	1,930.7	
Tunisia	5,406	3,815.3	243.0	792.9	429.0	
Egypt	1,769	1,269.3	78.1	244.8	137.9	
Palestine	883	633.5	39.0	122.2	68.8	
Jordan	4,689	3,364.6	207.1	649.0	365.6	
Lebanon	11,536	8,572.8	489.8	1,389.2	864.8	

Source: Authors' calibrations based on own methodology and mortgage market data presented in Table 10 in the appendix.

Notes: see Annex on methodology, assumptions. Existing buildings includes purchases and improvements.

- **Lebanon:** commercial banks offer non-mortgage housing loans and consumer loans with unlimited purposes; such loans are however treated as unsecured consumer loans and need to be funded fully from deposits. Modernization, capital repair or progressive housing loans

from banks in Lebanon are usually backed by mortgages, since those loans can be funded through BDL and IPH resources.

According to World Bank data there is a USD 2 billion non-bank lending sector in Lebanon, which has almost doubled in size relative to GDP since the 2000s to 4.1% in 2014. Despite takeovers by commercial banks, the microfinance industry is classified as non-bank. The growth of microfinance has been impressive (24% CAGR between 2009 and 2014 of total assets). This is more than double the growth rate of bank credit. Nevertheless, the sector is still small – in 2014 a range of USAID-sponsored companies had a net loan portfolio of USD 115 million, which permits the conclusion that the total microfinance portfolio is perhaps in the range of USD 200 million, or 0.5% of total resident credit. Total non-bank credit, including leasing, was about 4% of total resident credit in 2014. The largest four microfinance institutions offer housing loans. However, at the current nascent stage of the market the share of microfinance for housing – according to interviews held with two MFIs – would not exceed 10%.

Since we lack systematic data, one approach to arrive at a calibration is based on (the little) we know about the structure of housing investment in the region, and what long-term experience suggests about the use of mortgage and non-mortgage lending for different types of housing investments. The results of this admittedly very crude approach are presented in Table 12.

We assume that the investment structure reported for Jordan (see Figure 2) is spread across new buildings, extensions of existing buildings and improvements of existing buildings. However, housing lending is also provided for land purchases and purchases of existing housing units. We know from internationally comparative work that the market share of the former is higher and the market share of the latter is lower in MENA. In most part the focus of the portfolio on construction investment in different forms is due to the tense situation of the housing market. Our assumption is that 5% of the retail portfolio goes to land purchases and 10% to the purchase of existing housing stock.

From here we have to make assumptions, reported in Table 20 in the appendix, about the share of each housing investment that is funded by loans (= housing loans) and that funded by mortgages (a subset of housing loans). For instance, we assume that 70% of new building construction is funded with loans, of which 90% is funded by mortgages. In contrast, improvements are assumed to be funded 25% by loans, 30% by mortgages. We multiply the results with the known mortgage outstanding, which gives a final assumption that the reported outstanding is in fact mortgage loans.

The result of this exercise is a very approximate calibration of the housing loan portfolios in the focus countries and across products. Regarding non-mortgage lending ('other housing loans'), we arrive at a market size that adds roughly one-third to the reported mortgage market size. Even though the lending share in this segment has room for expansion, the bulk of this lending is in home improvements followed by new buildings (most likely progressive housing) and purchase.

3.2.2. Products, Pricing and Funding

Developer installment sales. Historically, homebuyers in the region have overwhelmingly financed through an installment sale product with full transfer of ownership after completion of installments

offered by developers. These were short-term installment sales, e.g. 2 years (prior to completion) plus 5-10 years (after completion), and therefore impacted on affordability. Even though mortgages promise higher construction margins, developers have at times resisted the transformation of installment sales into mortgages (as occurs in Egypt since consumer pre-savings were a convenient substitute for expensive or unavailable bank construction finance).

Non-registered housing, home improvement, home extension and small purchase loan products. For smaller home improvement and other housing loans the cost of entry of a mortgage, and – depending on foreclosure laws also the cost of collateralization for the borrower – are high relative to the loan amount. Banks in the region across the board therefore offer short- and mid-term loans on a personal signature basis.

Loans without mortgage collateral can also take a significant market share away from larger and more long-term lending, such as for progressive housing construction, for home extensions (second stories), for the purchase of land and of existing housing. Frequently mortgage liens even for larger loans are avoided as a result of the absence of legal land title (such as happens in Palestine), the cost and time requirements for registration, and other cumbersome formalities which are required for land registry entry. Underwriting of such loans then is typically more restrictive, e.g. with shorter maturities.

Microfinance lenders in the region so far focus on home improvement. Consumer protection frameworks that address the cost issues for small volume bank lending and microfinance are under development or have been implemented in the region.

Pricing and funding. Short-term non-mortgage loans are better matched by the deposit base than long-term mortgages. However, a certain concern is mid-sized mid-term loans and large long-term loans provided where mortgages cannot be registered: these loans are exempted from liquidity facility funding and would be difficult to include going forward in secured bank bonds. Also, there is a shortage of mid-term savings products such as contract savings for housing that fund home improvement and capital repair loans, as are available in Germany.

Microfinance institutions in the region fund themselves through increasingly diversified sources. Table 13 shows weighted average maturities and interest rates for institutions in the focus countries. Debt maturities are between 2 and 4 years, which is a rather typical figure for both savings banks and commercial banks. Preferable for the provision of long-term housing loans would be access to a long-term finance source. Funding interest rates reported in Table 13 and provided through mixmarket.org differ quite strongly. In order to improve access to funding, there are programs in some focus countries to formalize regulation, transfer supervision from ministries to central banks, and in the mid-term convert institutions to deposit-taking institutions with simultaneous access to central bank liquidity. These steps would both create a de-facto savings bank system, which is often lacking, and considerably improve crisis resilience. Joint funding vehicles have been developed also, e.g. in Morocco.

Country evidence:

- **Morocco:** banks offer unsecured housing improvement and capital repair loans. Also, consumer loans are in fact used for housing improvement even if this is not declared.

The postal bank, Al Barid Bank, offers unsecured consumer loans to its mostly salaried clients, the characteristics of the loans – up to MAD 300,000 (about USD 30,000) and up to 7 years –

making them well suited for housing investment. This is an example in Morocco of meso-finance – intermediary products between micro-credit and mainstream loans (mortgages in the case of housing) with the potential to fill a large unserved market.

Also, microfinance for housing in Morocco has room for expansion from the currently 6% of MFI loans. The product is constrained by the cap set by the current regulatory loan volume ceilings, which are MAD 50,000 (USD 5,000). One microfinance lender interviewed indicated that they already invested 20% of their portfolio in housing loans. MFI clients requesting larger loans are typically introduced to mother banks or correspondent banks. Interviewed MFIs are calling for the lifting of the loan ceiling in order to be able to keep the business in-house.

Funding is also a constraining factor, since higher loan amounts require longer amortization periods. In this respect, an important role could be played by a fund, JAIDA, that was established in 2007 by the government and the Moroccan Caisse des Dépôt et de Gestion (CDG) to channel resources towards the microfinance industry. JAIDA has received financial support from international donors, including KFW and the French AFD, and CDG, who have a stake in its capital. JAIDA provides both institutional support and financing for specific projects. An example is the promotion of mobile payment systems.

Another initiative in the Moroccan microfinance sector was a partnership between two MFIs, Al Amana and Attawfiq, and the cement producer Lafarge to develop an innovative business model based on the integration of finance, technical assistance to self-builders and local artisans and the delivery of building materials. The initiative was interrupted.

As a result of active bank and international lending to MFIs, the website mixmarket.org reports a healthy weighted average funding maturity for 11 Moroccan microfinance institutions of 86 months at weighted average interest rates of just under 5% (USD).

- **Tunisia:** ENDA launched a microcredit for housing product ‘EDDAR’ as early as 2007, which finances home improvement. Its main conditions are as follows:
 - Amount: TND 500 to 5,000, the then legal ceiling (USD 2,300)
 - Maturity: 24 months maximum
 - Interest rate: 1% per month on the borrowed capital, equivalent to 23% per annum (+ commissions)

ENDA met a strong demand initially, to the point that the association had to put a brake on product distribution given liquidity constraints. It seems to remain the only such product available in the market. The regulatory cap on micro-loan amount remains an obstacle to use micro-finance for housing purposes.

The funding base for the microfinance sector was until recently constrained and relatively weak due to the reduction of bank lending to the sector. The only authorized legal form were associations which were not allowed to take deposits, thus turning funding into a challenge. The Tunisian government has been seeking to fill this gap through funding and subsidies provided by the semi-public ‘Banque Tunsienne de Solidarité’, with little success.

A new framework in 2012 opened up the possibility of using the legal status of ‘Société par actions’ (joint stock company) and established a new Authority – ‘Autorité de contrôle de la microfinance’ (AMC) to regulate and supervise the sector, including setting prudential requirements and delivering licenses. ENDA has taken advantage of these changes and created a joint stock company, ENDA Tamweel, which will specialize in the provision of housing loans. This activity remains constrained however by a regulatory ceiling for loan amounts (20,000 TND, or about USD 9,000), the policymakers favoring the use of micro-credit for income generating activities.

- **Egypt:** the traditional installment product offered by developers should be replaced over time through mortgages by government programs supported by the World Bank. An innovation by EMRC, which is co-owned by developers, is to offer a refinancing product for developer installment sales funded by the finance companies.

Egyptian microfinance lenders are highly fragmented and suffer from high funding cost and extremely short funding tenors, as the data provided by mixmarket.org in Table 13 reveals. Clearly, these conditions would permit only for very small and short-term housing loans going forward.

- **Palestine:** developer installment sales are only slowly being replaced through mortgage lending, and mortgages are often given linked to specific projects. Developers co-own PMHC, the mortgage funding facility, and as well are de-facto owners of local banks that are used for captive finance.

Banks will routinely finance, and PMHC will refinance, home extensions ‘either horizontally or vertically’ (PMHC). Yet for that product a land and mortgage registration is required. However, banks also offer loans on non-registered property as housing loans. Bank of Palestine advertises the purchase of skeletons – unfinished construction – to be collateralized by the existing construction or other properties. The maximum loan limit in this case is USD 100,000 and maximum tenors are 10 years (completion) and 12 years (purchase of existing properties). Maximum LTV is also more conservative than typical mortgage loans, namely 75% (completion) and 85% (purchase of existing properties). Cairo Amman Bank in contrast funds housing loans without property registration requirement up to JOD 150,000 (ca. USD 200,000) and over 25 years. Banks in Palestine also offer home improvement loans on registered properties but without mortgage collateral, typically with maxima in the range of USD 20,000 – 30,000.

In contrast, home improvement, completion and purchase loans offered by microfinance lenders are short-term and small. Microfinance lender Faten offers maturities between 4 and 48 months up to USD 15,000. Contracts can take the form of an Islamic Murabaha sale or by standard commercial banking agreement. The UN refugee network UNRWA offers microfinance for housing up to USD 15,000 as well, as is Bank of Palestine (which has acquired a microfinance lender). The relatively high loan volumes mean that the gap to commercial bank lending is rather small. A typical monthly interest rate for microfinance for housing is 1.2%. The consumer protection framework for microfinance is currently under development as the central bank’s new division receives international technical assistance.

The central bank in 2011 assumed regulatory powers over Palestinian microfinance institutions and is itself a recipient of technical assistance in that regard (inter alia from GIZ). The goal is to professionalize the institutions and in the mid-term convert them into deposit-taking entities. To the extent that microfinance institutions have not already been acquired by banks (e.g. Al Rafah by The National Bank), this would create a network of

retail savings and loan institutions that is sorely missed in Palestine. Currently, microfinance institutions are funded mainly by international microfinance program sponsors (UNRWA, Vitas) and to a lesser extent by banks. The website mixmarket.org reports a weighted average funding maturity for 6 Palestinian microfinance institutions of 46 months at weighted average interest rates of 3.29% (USD). Remarkably, the funding conditions of the 4 NGOs among these are reported as significantly better, at 1.86% (USD).

Table 13: Funding Conditions of Microfinance Institutions in the Focus Countries

	Number of MFIs	Amount (USD), total	Amount (USD), median	Rate, weighted average
Morocco	11	2,651,685,349	1,683,091	4.94%
Tunisia	#NV	#NV	#NV	#NV
Egypt	13	507,196,138	1,017,545	9.77%
Palestine	6	29,547,093	245,140	3.29%
Jordan	7	256,583,920	704,949	7.05%
Lebanon	4	51,781,770	250,000	5.20%

Source: mixmarket.org

- Jordan:** non-mortgage loans for construction or existing housing purchase are available from banks, typically with loan volume limits and tighter underwriting (see below). Non-mortgage home improvement, expansion and purchase loans are standard bank products. Banks prefer minimum amounts, e.g. Jordan Ahli Bank requires a minimum loan amount of JOD 5,000 (USD 7,000) for expansion and JOD 3,000 (USD 4,200) for home improvement. Maturities can be long-term; banks would prefer to impose minima to safeguard spread; however, they usually offer a prepayment option.

The authors were able to identify 3 out of 11 microfinance institutions with housing loan offers: Al Watani, MEMCC – founded by the U.S.-based Cooperative Housing Foundation – and Tamweelcom. These lenders offer housing loans for home improvement and in theory also extensions and small purchases. They limit themselves to small loan volumes: e.g. Alwatani funds only home improvement up to JOD 2,000 or USD 2,900, and Tamweelcom, a microfinance institution with focus on lending to women, lends for housing purposes between JOD 300 and JOD 1,500 (USD 430-2,140). Thus there is a significant gap to commercial bank offers, which often require minimum loan amounts to amortize costs. MEMCC differentiates loan amounts for housing by amortization schedule (declining vs. flat). Monthly interest rates charged by MEMCC are between 0.75% and 1.5%.

The World Bank is currently supporting the development a consumer protection framework and capacity building of regulators aimed at microfinance through technical assistance.

Bank non-mortgage purchase, home improvement and expansion loans are offered at maturities up to 20 years at fixed interest rates, which raises the question of matched refinancing. Non-mortgage finance is outside the JMRC mandate, which requires mortgage registration.

Except for one bank – Cairo Amman Bank – all microfinance institutions are funded by donors, government agencies or on commercial terms in the market. MoPIC (2012) highlights diversified commercial funding sources. Microfinance for housing loans are fixed interest and short maturity loans, e.g. up to two years, and thus match the funding profile for other microfinance activities. The website mixmarket.org reports a weighted average funding maturity for 7 Jordanian microfinance institutions of 68 months at weighted average interest rates of 7.05% (USD) with little variation across types.

- **Lebanon:** home buyers historically paid in cash or bought their homes through developers' installment sale schemes that began during the construction phase and ended in the first few years after completion. For finished units, these schemes have been gradually replaced in the past 10 years by more long-term mortgage lending in the past 10 years. However, consumers continue to be asked by developers to provide finance during the construction phase, and banks will provide such financing funded through deposits.

The authors reviewed the loan offers of the five largest microfinance lenders, of which four were confirmed as providing home improvement and other housing microfinance loans. Loans are offered by Al Majmoua, Vitas, IbdAA, and Emkan. Home lending could not be confirmed for the Shiite microfinance organization Al Qard Al Hassan and smaller microfinance institutions. The most advanced product set seems to be offered by Vitas, a housing product up to USD 7,000 and a 'housing plus' product up to USD 13,000. Maturity in both cases offered by Vitas is short – between 2 and 5 years – and the pricing offered discourages longer maturities, for reason of credit risk according to the lender.

The website mixmarket.org reports a weighted average funding maturity for 4 Lebanese microfinance institutions of 66 months at weighted average interest rates of 5.2% (USD). A number of programs are partially or fully guaranteed by donors/sponsors such as AFD or USAID or Grameen-Jameel. This division of labor combines the ample liquidity of Lebanese banks with dedicated underwriting/servicing and guarantees. Banks have also proceeded to invest in microfinance institutions directly. Emkan finance has been converted from an NGO into a subsidiary of the commercial bank Bankmed.

3.2.3. Underwriting and Market Penetration

Non-mortgage lending in the region by banks comes with higher surety requirements, usually in the form of guarantees and occasionally other real collateral. Borrowers and guarantors are routinely required to make income deposits through the bank. Banks will however lower income requirements for smaller home loans proportionally. There are signs of increasing competition for the small-ticket income home improvement and extension market, which, so far, however, have not materialized in lower underwriting requirements.

Microfinance operates throughout the region with similar techniques, with deposit requirements being operated through correspondent banks if there is no banking license. Guarantor requirements are comprehensive and the requirement for 3 guarantors for housing loans is not unusual. Collateralization techniques focus on cars or furniture or the family's gold assets. The authors could not obtain a full picture however due to scarce website information. Microfinance is largely self-targeting through its

relationship banking approach, maximum loan amounts and tenors, and underwriting and servicing/collection specifics. Typical loan volumes can be increased from micro loan levels to larger levels, typically into the USD 10,000-USD 20,000 range.

As the commercial banking industry has discovered microfinance and its target groups in the past decade, many microfinance institutions and NGOs have been acquired by commercial banks or have changed their roles from full service providers to underwriters and loan servicers for banks (as in Lebanon, Palestine, Jordan).

Country evidence:

- Morocco:** the aggregate number of micro-credit customers significantly declined from a peak reached in 2007 after an uncontrolled growth phase, and is far from covering the population that could be potentially covered, estimated at more than 3 million. A large proportion of clients are located in rural or urban problem areas. The sector is self-targeting to lower income households and/or smaller projects as a result of the maximum loan volume regulation.

Since 2006 Moroccan microfinance institutions have been supervised by the BAM following a considerable number of incidences of over-indebtedness (through borrowers taking up multiple micro-credits). High NPL rates were found – NPLs have been up to 27% of loans. The soundness and capacity of the sector have improved recently through the creation of an informal credit information platform between microfinance institutions, which supplements the official and mandatory credit bureau. Interviewed MFIs indicate that the performance of their housing loans is in line with the rest of the portfolio. Also noteworthy is the development of a mobile payment technology in partnership with the ‘Centre Monétique Interbancaire’.
- Tunisia:** microfinance in Tunisia is self-targeting to lower-income households through its regional scope and loan volume limits. ENDA’s activity is spread between rural (40%) and peri-urban (60%) areas. In terms of employment profile, ENDA’s housing product is open to anybody with an income generating activity. Until recently, the individual loan amount was capped by regulation at TND 5,000 (EUR 2,300). The new regulatory framework lifted the maximum amount authorized for micro credit to TND 20,000 (EUR 9,000), but only to finance income generation activities.

Mobile banking is very important for lowering the servicing cost of small amount loans.

- Egypt:** there is no microfinance for housing loans on offer in Egypt (see above).
- Palestine:** minimum income requirements by banks for ‘housing loans’ are lower than for mortgage loans. For example, Bank of Palestine requires at least USD 500/month, deposited on a regular basis in the account. However, formality and guarantee requirements are high, e.g. Bank of Palestine requires a minimum of 2 years’ employment tenure and 3 guarantors who must also have their salaries deposited with the bank.

Palestinian microfinance lenders of home improvement loans typically require co-guarantors or collateral in the form of cars or gold (Bank of Palestine’s: ‘gold mortgage’ for example). A typical requirement is that guarantors have salaries transferred to the lender. Microfinance however is self-targeting through the focus of microfinance institutions, of which a number

are still independent from banks and which target women or rural areas. Market penetration regarding housing likely goes down to the second quintile.

- **Jordan:** non-mortgage loans for construction or existing housing purchase are available from banks at more restrictive underwriting terms. For instance, Cairo Amman Bank reduces maturity for construction loans from 30 to 15 years and for existing housing to 20 years. Additional surety requirements seem to be less extensive than in Palestine given the higher levels of competition in banking.

Banks prefer minimum volumes for home improvement and extension loans in order to amortize underwriting costs. Typical volumes advertised range, depending on purpose, from USD 4,000-USD 7,000. Minimum income requirements are relatively low, e.g. Jordan Ahli Bank requires a salary transfer of JOD 300 (USD 420) for private sector and JOD 200 (USD 290) for public sector employees. Minimum tenure is required with different lengths for private and public sector employees.

The target group of microfinance in Jordan differs significantly from banks not just in terms of gender, but also in regional distribution. 73% of clients are women. Two-thirds of lending is outside Amman, where the portfolio is growing at double the rate compared to within Amman. This permits microfinance lenders to gain sufficient demand with lower housing loan volumes. However, it would seem that in general smaller microfinance lenders so far do not offer the product. The websites of institutions with housing offers reviewed remain silent on underwriting detail such as additional collateral and guarantor requirements. Microfinance NPLs stood at 0.8% in 2013 and are 'among the lowest in the world' (Central Bank of Jordan).

- **Lebanon:** mortgage loans between 5 and 15 years' maturity are offered by the Institute of Public Housing (IPH) through the banks on concessionary terms that can finance existing home purchase, progressive housing and renovation purposes. The loan volume, loan type and property restrictions are the same as for their 30-year mortgage product described above, and have the same applicable exemptions. Minimum income required, as advertised on bank websites, can be as low as USD 400/month.

Microfinance institutions such as Vitas and Al Majmoua underwrite housing loans in the same way as VSE loans, and primarily, although not exclusively, target their existing client base. In interviews, default rates are reported to be no different between the two sub-portfolios. However, maturity is kept short, i.e. high amortization is a disciplining element in the financing. A problem is the lack of bankable projects at modest loan volumes in the high-density Lebanese coastal areas, which leads to limiting the use of funds to internal modernizations of apartments. There seems to be greater potential for capital repair, modernization and extension lending for MFI in rural areas.

3.3. Refugee / IDP Housing Assistance Programs

The authors found two diametrically opposed approaches – emergency shelter provision through camps (Jordan) and absorption by the housing market (Lebanon). These approaches may reflect different refugee policy assumptions (temporary vs. permanent nature of refugees), but in essence they are the result of different urban policy approaches (new towns/city enlargements vs. organic growth).

Programs aiming at emergency shelter provision are torn between the efficient provision of minimum standard shelter and the demands of refugees, which can often be only insufficiently met. Key success factors are location and flexibility to permit the development of urban services and labor markets, as well as ethnic homogeneity. This was the case with the historical camps in the region hosting Palestinians that over time developed into cities.³¹

Programs aiming at housing market integration are more difficult to create and target, but likely lead to more sustainable housing solutions. The difficulty in the Middle East is the absence of a multifaceted demand-driven housing policy that targets the main integration subsector, the rental market. Public programs also meet the very limited ability of beneficiaries to pay. Two main approaches can be identified here: upgrading of informal or substandard housing with credit programs, and arrangements with the cooperation of rental landlords to upgrade or finish housing units, usually on a quid pro quo basis for rent-free or low-rent tenure.

Country evidence:

- **Jordan:** the focus of the government is on the construction of camps. The UNHCR and the Jordan Hashemite Charity Organization (JHCO) jointly planned and developed the Al Zaatari Refugee Camp for Syrian refugees in Mafraq Governate on Jordanian armed forces-owned land. This camp has been called 'The Instant City' since it reached within three years a population of 120,000 with more than 25,000 housing units, consisting of 17,000 caravans and 8,000 tents. Caravans cost an average of USD 3,125 and both caravans and tents were donations. Ledwith (2014) discusses the multifaceted approach to build a fully operational community including schools, mosques, stores and jobs, and even with some limited job creation. However, it is clear from strict building codes and policing that the Jordanian government has no intention of regularizing the camp to create a permanent city. Rather it would appear that camps are used as buffers to keep Syrian refugees away from the already stretched Jordanian housing and labor markets. Willingness to pay for housing services by refugees has not been tested and the high fluctuation rate of the camps indicates that it is likely it would be low.

NGOs in Jordan run cash-for-rent schemes to enable refugees a certain extension of rental tenure in the housing market. Tenure stability is paramount since Jordanian government services cannot be obtained by the many refugees who have to frequently change housing. The Norwegian Refugee Council (NRC) is modifying this approach through a 'cash for upgrading' scheme in exchange for rent-free tenure for 1 or 2 years. NRC has secured funding for 3,500 units to house 12,250 Syrian refugees. This has the advantage of injecting investment into the housing sector and generating income. NRC accompanies these programs with an eviction monitoring and legal and regulatory counseling program, in order to improve tenure security of other refugees.

- **Lebanon:** the government has addressed the problem selectively, with a strict priority placed on internally displaced persons. The Displacement Fund was established after the end of the

³¹ Germany after WW II pursued both approaches to house refugees, new towns (e.g. Neugablonz near Augsburg) and dedicated city enlargements as well as integration into the housing markets through universally accessible social housing construction.

civil war in the late 1970s. It has rehabilitated deteriorated neighborhoods in Beirut and has built one large low-income housing complex in Tripoli. According to UN Habitat (2014), the agency has been the target of corruption allegations in the past. Government policies towards external refugees have been traditionally defensive, to the point that Palestinian camps that have existed for more than 60 years with high-density multi-story constructions still do not enjoy regularized land tenure, and theoretically land users can be evicted on 2 weeks' notice.

Highlighting the internal divisions of the country is the extensive reconstruction effort in the Shiite south of Lebanon and southern Beirut after the Israeli intervention of 2006. The Harek Hreit neighborhood reconstruction of Beirut in particular was the scene of a struggle between the Shiites and the government over the control of housing policy. The Shiites ultimately financed, constructed and distributed the new housing units largely on their own, even though the central government channeled donor monies to the project.

Refugee housing programs for Syrians and Palestinians are being developed by international donors and NGOs. The NGO Habitat for Humanity in 2014 for Palestinian camps has launched a home improvement program 'funding kitchens, bathrooms, waterproofing and replacing roofs or walls, and adjusting homes to be accommodated for people with disabilities'. HfH in August 2015 put out an emergency appeal for funding a program with a focus on similar upgrading measures as well as completion of unfinished buildings and expansion.³² For social balance reasons, and given the lack of government initiative in housing, the program will benefit both Syrian refugees and deprived Lebanese families. As in a similar NRC program, the key financial mechanism is the purchase of rent-free occupancy rights from landlords (i.e. tenure security) against investments funded by the program.

³² https://www.habitat.org/sites/default/files/lebanon_emergency_appeal_sept2015.pdf

4. Potential Initiatives Supporting Housing Finance Market Development

On the basis of the presented analysis, the authors see a number of potential commercial and policy initiatives able to improve the pricing, product development, market penetration/risk absorption capacity or risk transfer in the selected countries:

- Investment to support low-cost developers and/or specific low-income housing construction projects. The Moroccan experience shows that targeted supply-side policies are beneficial to developing formal low-cost construction in scale. Areas of interest could be direct equity investments in low-cost developers, long-term debt solutions to finance land banks and land servicing and short-term debt solutions to provide construction finance. In severely land-rationed situations, e.g. Lebanon, an initiative to develop low-cost housing could be designed jointly with land owners, e.g. charities. Investments can be protected through secured vehicles or PPP risk sharing.
- Investment in access to finance, e.g. via mobile banking projects by individual banks. Mobile banking is a very underdeveloped technology in MENA. Greater access to mobile banking addresses transaction cost and ability-to-pay signaling issues. Transactions costs are a major roadblock hindering mainstream financial institutions in offering small housing loans. The absence of recorded financial transactions renders underwriting low-income households particularly risky and costly.
- A mortgage credit guarantee approach as pursued in Morocco should help to expand lending at least into the self-employed middle-income strata of the population. Insurance could help to overcome more restrictive bank policy for this group. The Moroccan experience also demonstrates that insurance ought to be accompanied by proactively improving the underwriting and servicing abilities of banks for self-employed households or households with irregular incomes.
- Non-mortgage housing lending for purchase of land plots or existing low-cost units, extensions and major capital repairs often lacks long-term funding. Mortgage collateral is often an underwriting requirement of banks and public mortgage program sponsors, even where they explicitly include these market segments (e.g. Lebanon). However, the experience of micro-finance lenders shows that default rates of non-mortgage lending especially in owner-occupied housing can be reasonably low. Access to medium or long-term funding equivalent to mortgage loans is sought for this segment. Additionally, retail savings and loan products ('Bausparen') that usually have mid-term maturities could be designed for this market segment, and here the accumulated savings would provide additional protection of the lender.
- Specific housing lending for energy conservation and other environmental purposes is nowhere explicitly offered in the region as yet. Some sporadic efforts have been made on the supply, in particular to promote solar panels to provide hot water (Egypt, Palestine), but no specific financial products have been identified by the authors for this purpose. There is a definite need to develop adequate lending products for this purpose.
- In order to truly reach low- and middle-income households, the mortgage markets in the region continue to require better access to long-term finance enabling longer maturity and

fixed-rate loans. This holds in particular for long-term local currency lending where the risk of financial shocks is high and for which banks are insufficiently prepared. Existing liquidity facilities that serve this market operate often selectively and are generally not targeted. Refinancing options could be designed to support sufficiently creditworthy financial institutions in sufficiently stable legal and regulatory environments, or support the introduction of new products, where they exist, ideally in cooperation with existing refinancing facilities.

- Very little microfinance for housing is available in the region today. There are significant gaps between the bank and the microfinance market segments ('meso-finance'), e.g. in Jordan, Lebanon, Egypt and Tunisia, that can be bridged with mid-sized home improvement and home expansion loans. In Morocco, in order for this to happen, the legal lending limits would have to be changed. Funding solutions could be developed institutionally from both sides, i.e. by addressing microfinance lenders willing to upscale and banks willing to downscale their products. Microfinance lenders that are not in the market currently, as well as banks seeking product diversification and expansion, may have significant technical assistance needs.
- Finally, current refugee housing programs are mostly undertaken on a grant basis and therefore limited in scale. These programs could be up-scaled through loans, probably mixed with grant elements. The upgrading of refugee settlements that have become quasi neighborhoods for many years after having been built as transitional solutions could be supported. Equally, new settlements can be designed and built to have lasting usage and value, allowing a second-hand market if original settlers leave.

Appendices

Appendix I. List of Abbreviations

AFD	Agence Française de Développement
AMC	Association de Microcrédit
ARRU	Agence de Réhabilitation et de Rénovation Urbaine
BHT	Banque d'Hanitat
BMCE	Banque Marocaine Du Commerce Extérieur
BMCI	Banque Marocaine pour le Commerce et l'Industrie
CBE	Central Bank of Egypt
CDR	Council for Development & Reconstruction
CIB	Commercial International Bank of Egypt
CIH	Crédit Immobilier et Hôtelier
CSH	Contract Saving-for-Housing
DH	Moroccan Dirham
DTI	Debt-to-Income Ratio
EFSA	Egyptian Financial Supervisory Authority
EGP	Egyptian Pound
EIB	European Investment Bank
EMRC	Egypt Mortgage Refinance Company
FOGALOE	Fonds de Garantie pour le Logement
FOGARIM	Fonds de Garantie pour les Revenus Irréguliers
FOPROLOS	Fonds de Promotion des Logements pour les Salariés
FVIT	Faible Valeur Immobilière Totale
GDP	Gross Domestic Product
HDFC	Housing Development Finance Corporation (India)
HfH	Habitat for Humanity
HUDC	Housing & Urban Development Corporation
IDMC	The International Displacement Monitoring Centre
IDP	Internally Displaced Person

IFC	International Finance Corporation
ILO	International Labor Organization
ILS	New Israeli Shekel
INS	Institute National de Statistiques (Tunisia)
IRD	International Relief & Development
JOD	Jordanian Dinar
JODIBOR	Jordanian Dinar Interbank Offered Rate
KFW	Kreditanstalt für Wiederaufbau
LBP	Lebanese Pound
Lhs	Left-hand-side
LTV	Loan-to-Value Ratio
MENA	Middle East & North Africa region
MFIs	Microfinance Institutions
MoPIC	Ministry of Planning and International Cooperation
MSME	Micro Small and Medium Enterprises
NPL	Non-Performing Loan
NRC	Norwegian Refugee Council
PCBS	Palestinian Central Bureau of Statistics
PI	Partner Institution
Rhs	Right-hand-side
TA	Technical Assistance
TAF	Technical Assistance Facility
UNHCR	United Nations High Commissioner for Refugee
UNRWA	United Nations Relief and Works Agency
USAID	United States Agency for International Development
USD	US Dollar
VSF	Villes Sans Bidonvilles
WDI	World Development Indicators

Appendix II. Literature

Regional comparisons

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Appendix III. Links

Regional/Global

UN Housing Statistics

<http://unstats.un.org/unsd/demographic/sconcerns/housing/chs2011.htm>

United Nations Database

<http://data.un.org/>

UNRWA

<http://www.unrwa.org/resources>

UNHCR

<http://www.unhcr.org/> AfDB North Africa Economic Outlook

<http://www.africaneconomicoutlook.org/en/>

IMF Middle East Economic Outlook

<http://www.imf.org/external/pubs/ft/reo/2015/mcd/eng/mreo0515.htm>

World Bank MENA Database

<http://data.worldbank.org/region/MNA>

Housing Finance Information Network

<http://www.hofinet.org/>

Global Property Guide

<http://www.globalpropertyguide.com/>

Global project on access to finance (World Bank)

<http://www.cgap.org/>

Global microfinance CP initiative

<http://www.smartcampaign.org/>

Microfinance network

<http://www.sanabelnetwork.org/home/default.aspx>

Making Finance Work for Africa

www.mfw4a.org

Morocco

Banks

<https://www.albaridbank.ma/wps/portal/AlBarid>

<http://www.gbp.ma/Pages/Home.aspx>

<http://www.cdm.co.ma/www/fr/website/accueil>

<http://www.creditagricole.ma/Pages/default.aspx>

https://en.wikipedia.org/wiki/List_of_banks_in_Morocco

Central bank

www.BAM.ma

Government, Ministry of Housing

www.mhu.gov.ma

Tunisia

Banks

www.bh.com.tn

<http://www.atb.com.tn/>

<http://www.bna.com.tn/>

https://en.wikipedia.org/wiki/List_of_banks_in_Tunisia

ENDA microfinance

www.endarabe.org.tn

Central Bank

www.bct.gov.tn

Government, Statistiques Tunisie

<http://www.ins.tn/>

Egypt Banks

<http://www.banquemisr.com/ar/home>

<http://www.nbe.com.eg/en/main.aspx>

<https://www.hsbc.com.eg/1/2/eg/>

<http://www.adib.eg/>

<https://www.alexbank.com/En>

https://en.wikipedia.org/wiki/List_of_banks_in_Egypt

Central Bank of Egypt

<http://www.cbe.org.eg/en/Pages/default.aspx>

Housing Information network (HOFINET) Egypt

<http://www.hofinet.org/countries/country.aspx?regionID=5&id=51>

The World Bank Egypt Inclusive Housing Finance Program 2015

<http://www.worldbank.org/projects/P150993?lang=en>

Palestine Banks

<http://www.bankofpalestine.com/en/retail/credit-facilities>

<http://www.qudsbank.ps/eng/page/About%20Us>

<http://www.tnb.ps/index.php/en/>

https://en.wikipedia.org/wiki/List_of_banks_in_Palestine

Palestinian Monetary Authority

<http://www.pma.ps/>

PECDAR

<http://www.pecdar.org/>

PECDAR report on housing in Palestine (2000s)

<http://www.pecdar.ps/etemplate.php?id=264>

List of PECNDAR programs

<http://www.pecdar.ps/regions.php>

Palestinian Investment Fund (PIF)

<http://www.pif.ps/index.php?lang=en>

<http://www.pif.ps/index.php?lang=en&page=1244464511131>

PIF-Amal low- and middle-income housing finance program

<http://www.pif.ps/pdfs/opennewdoors-en.pdf>

Palestinian Central Bureau of Statistics

<http://pcbs.gov.ps/default.aspx>

Palestinian Home Mortgage Corporation

<http://www.pmhc.com/>

Jordan Banks

<http://www.hbtf.com/en>

<http://www.ahli.com/>

<http://www.cab.jo/>

<http://www.capitalbank.jo/>

<http://www.arabbank.jo/>

https://en.wikipedia.org/wiki/List_of_banks_in_Jordan

Jordan Mortgage Refinance Company

<http://www.jmrc.com.jo/jmrc/Homepage.aspx?Lng=2>

Microfinance institutions

http://microfinance-mena.org/?page=Pages_Activities&id=2

CHF Jordan: http://www.jordanyp.com/company/344278/Cooperative_Housing_Foundation

Government Department of Statistics

<http://web.dos.gov.jo/?lang=en>

Central Bank of Jordan

<http://www.cbj.gov.jo/>

Lebanon Banks

www.fransabank.com

www.creditlibanais.com

www.jammalbank.com.lb

www.bankmed.com.lb/

<http://www.bankaudi.com.lb/Lebanon/Home>

https://en.wikipedia.org/wiki/List_of_banks_in_Lebanon

Public corporation for housing/PCH

<http://www.pch.gov.lb/>

Global communities/CHF

<http://www.vitaslebanon.com/index.php/en/>

<http://www.globalcommunities.org/jordan>

USAID investment in microfinance project

http://pdf.usaid.gov/pdf_docs/PA00KHBX.pdf

Habitat for Humanity

<http://www.habitat.org/where-we-build/lebanon>

Global housing indicators – survey on housing and housing finance policies

<http://globalhousingindicators.org/en/content/beirut-lebanon>

CARD – Center for Arab Research and Development

<http://www.cardme.org/index.html>

Lebanese rental sector

<http://www.cessma.univ-paris-diderot.fr/spip.php?article253>

Government/agencies

<http://www.worldbank.org/en/country/lebanon>

<http://unhabitat.org/lebanon/>

Appendix IV. Data

Figure 7: Age Structure of the Population and Young Population Dynamics

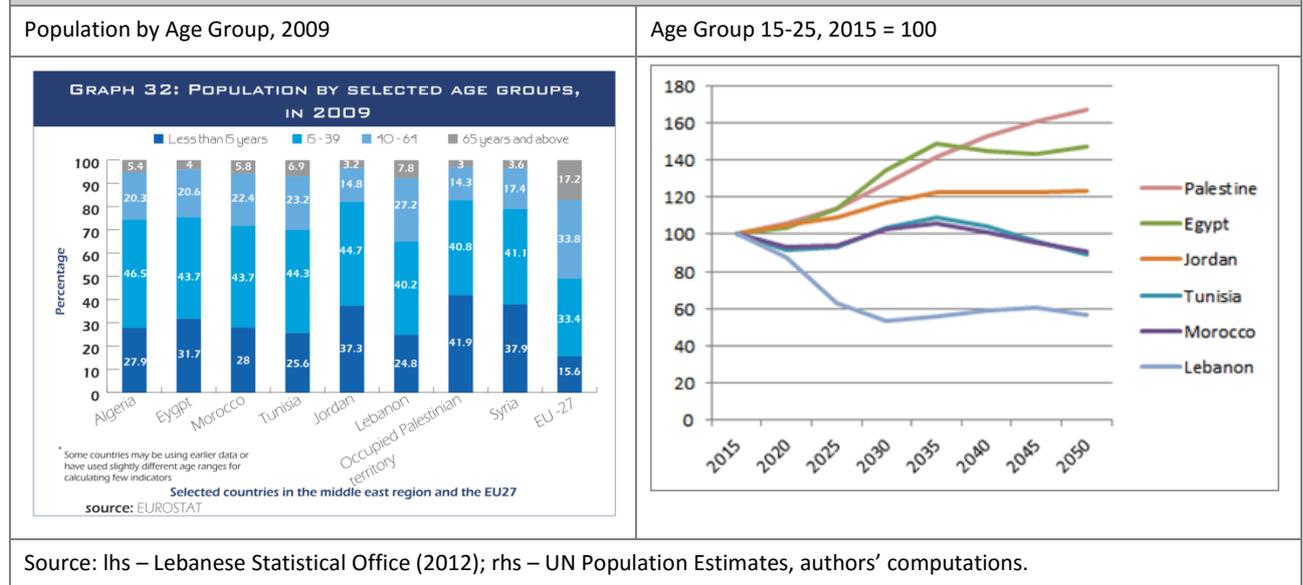


Figure 8: GDP Per Capita and Consumption Expenditure Development in the Focus Countries

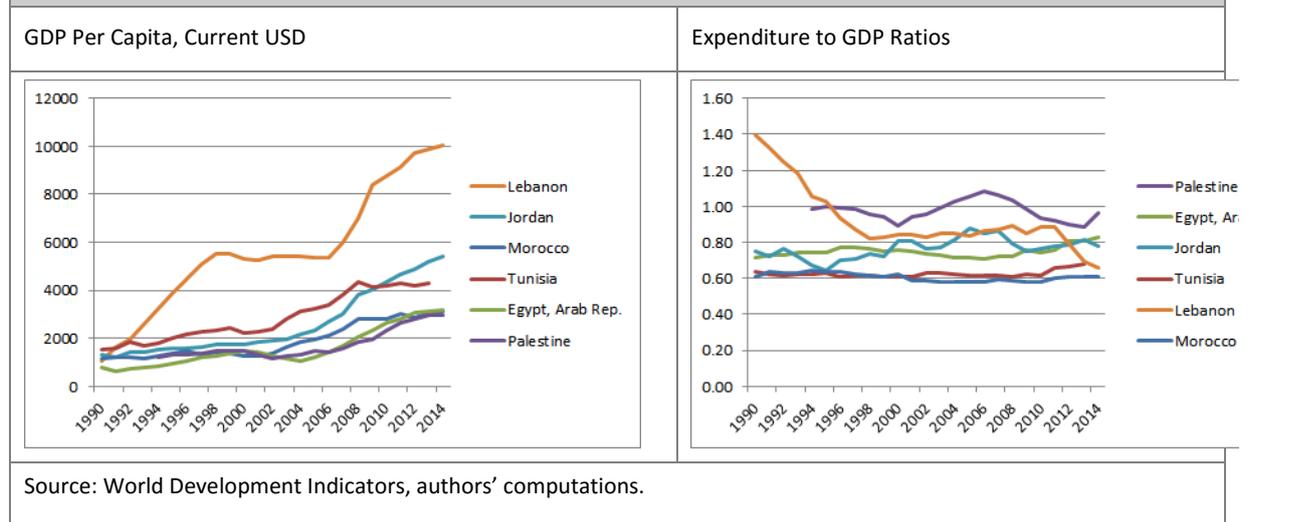


Figure 9: Shelter Decisions by Syrian Refugees in Lebanon

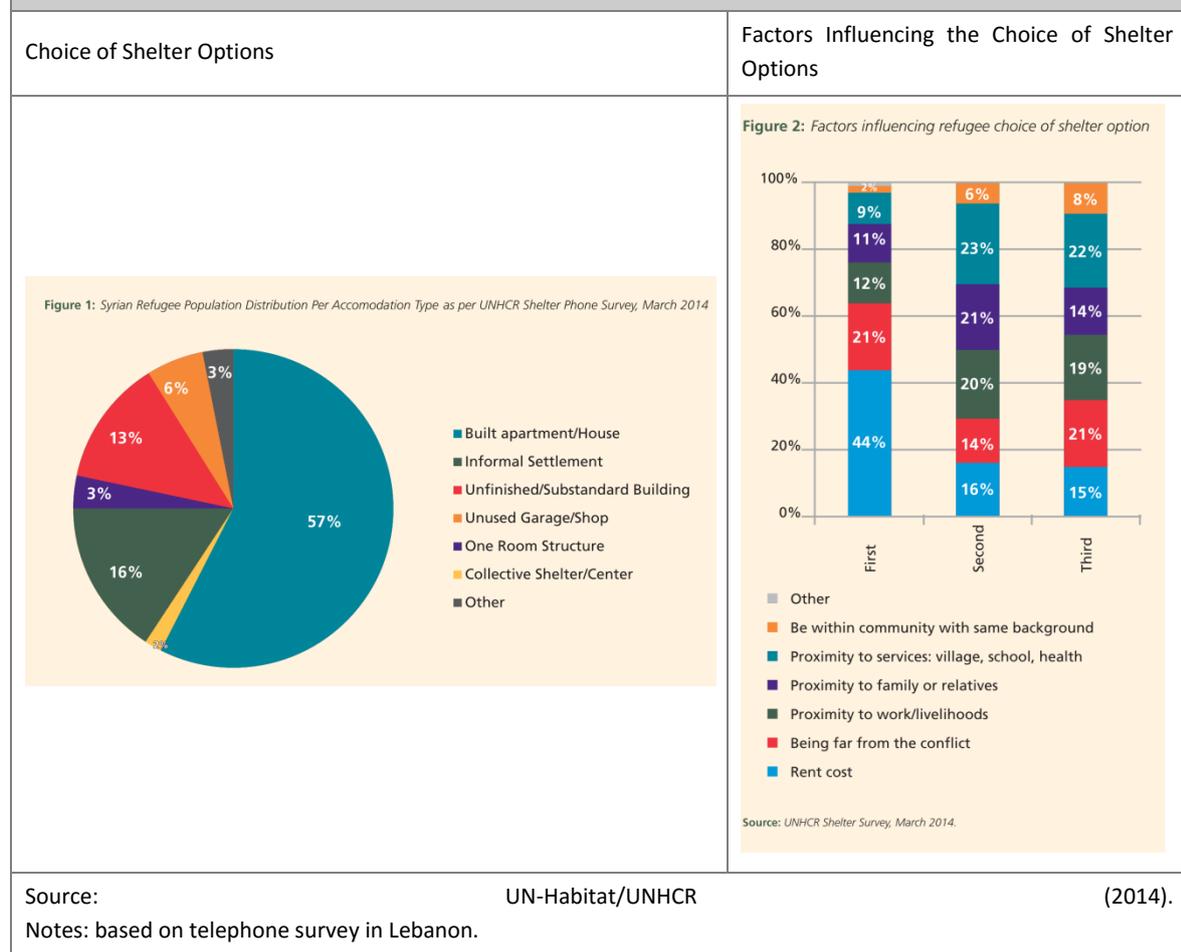


Table 14: Numbers of Refugees in the Middle East

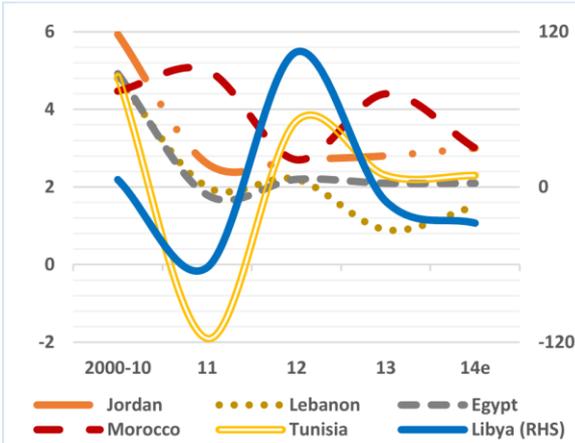
Statistical Snapshot*			
Countries [1]	Refugees from [2]	Refugees in [2]	IDPs [3]
Bahrain	347	311	0
Iraq	369,904	271,143	3,596,356
Israel	971	39,716	0
Jordan	1,716	654,141	0
Kuwait	994	614	0
Lebanon	4,272	1,154,040	0
Oman	29	151	0
Qatar	21	133	0
Saudi Arabia	630	561	0
State of Palestine	97,235	0	0
Syrian Arab Republic	3,883,585	149,140	7,632,500
United Arab Emirates	90	417	0
Yemen	2,628	257,645	334,093

Notes: * As at December 2014

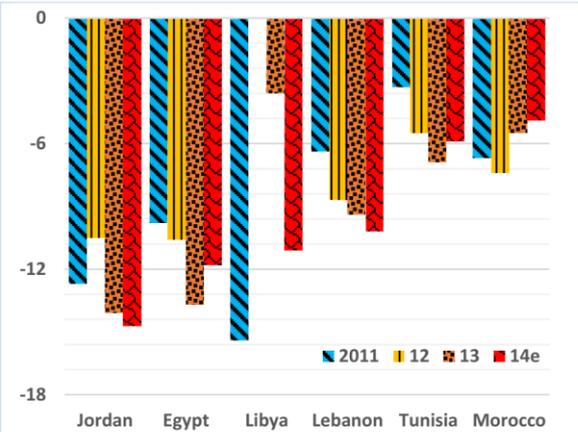
Source: UNHCR.

Figure 10: GDP Growth, Fiscal Balances and Youth Unemployment in the Middle East

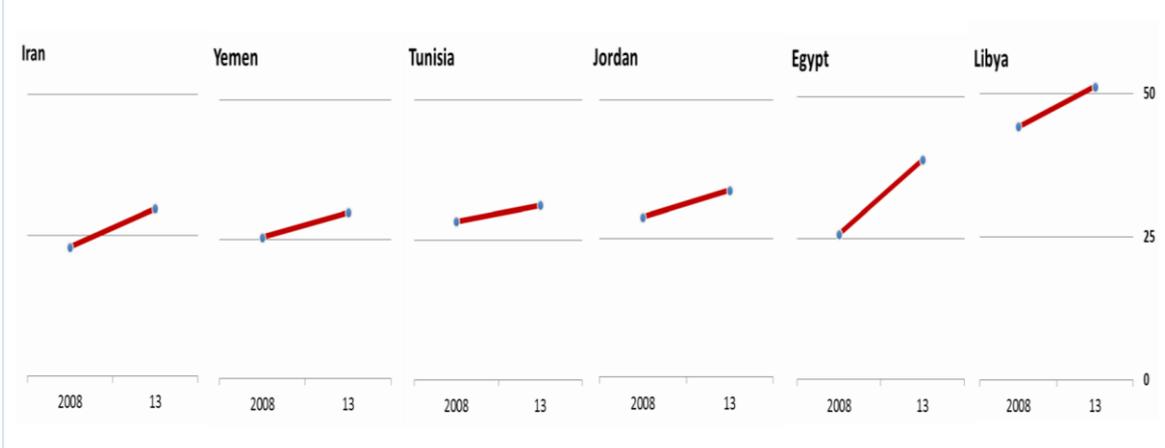
Figure 2.1 GDP Growth Rate (Percent)



Fiscal Balance (% of GDP, (-) deficit)



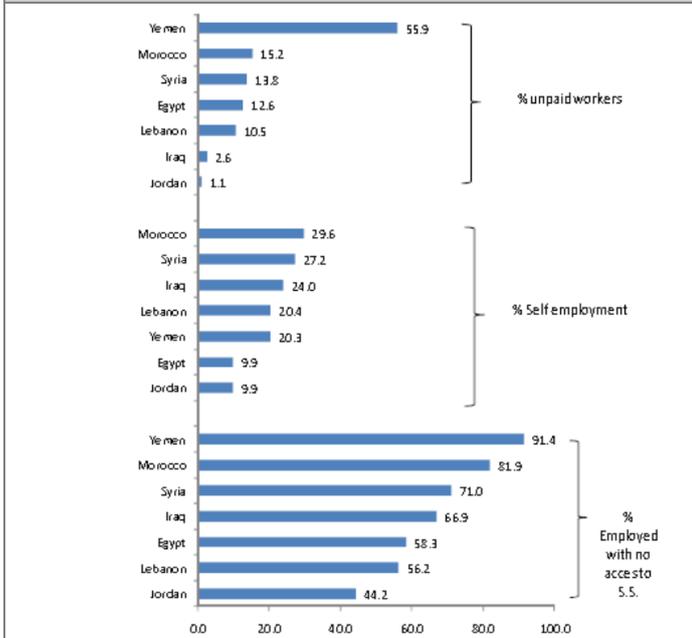
Youth unemployment (% of total labor force ages 15-24)



Source: World Bank.

Source: World Bank.

Figure 11: Informal Employment by Type in Selected MENA Countries

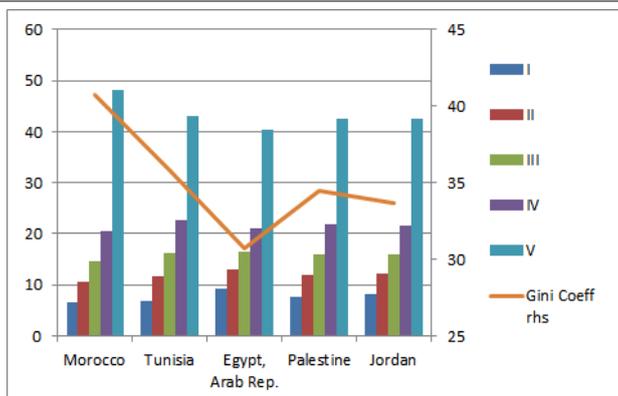


Source: Angel-Urdinola, and Tanabe (2012).

Notes: Data from surveys undertaken between 2001 and 2006.

Figure 12: Income Distribution in the Focus Countries, excluding Lebanon

Income Distribution by Quintile and Gini Coefficient



Source: World Development Indicators.

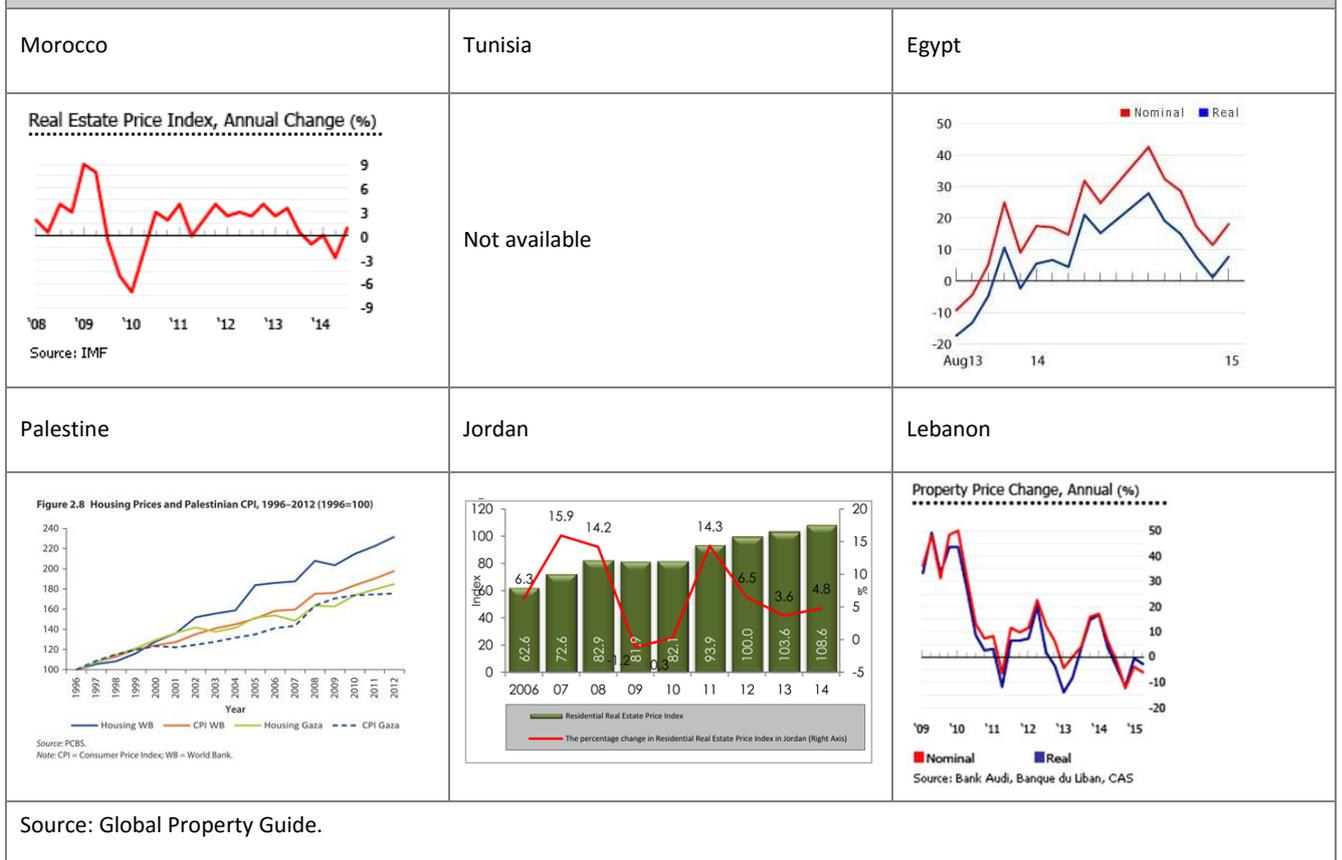
Notes: Lower Gini means more equal distribution.

Table 15: Consumption Expenditure Distribution in Jordan and Tunisia

	Jordan 2010, 2005 PPP USD			Tunisia 2010, 2011 PPP USD		
	% of total	Month		% of total	Month	
Bottom 40%	3.58	50.8%	107.29	4.40	45.8%	132.11
Total population	7.05	100.0%	211.37	9.61	100.0%	288.41

Source: World Development Indicators, authors' computations.

Figure 13: House Price Dynamics in the Focus Countries



Source: Global Property Guide.

Figure 14: House and Land Price Levels in Metropolitan Areas in the Selected MENA Countries

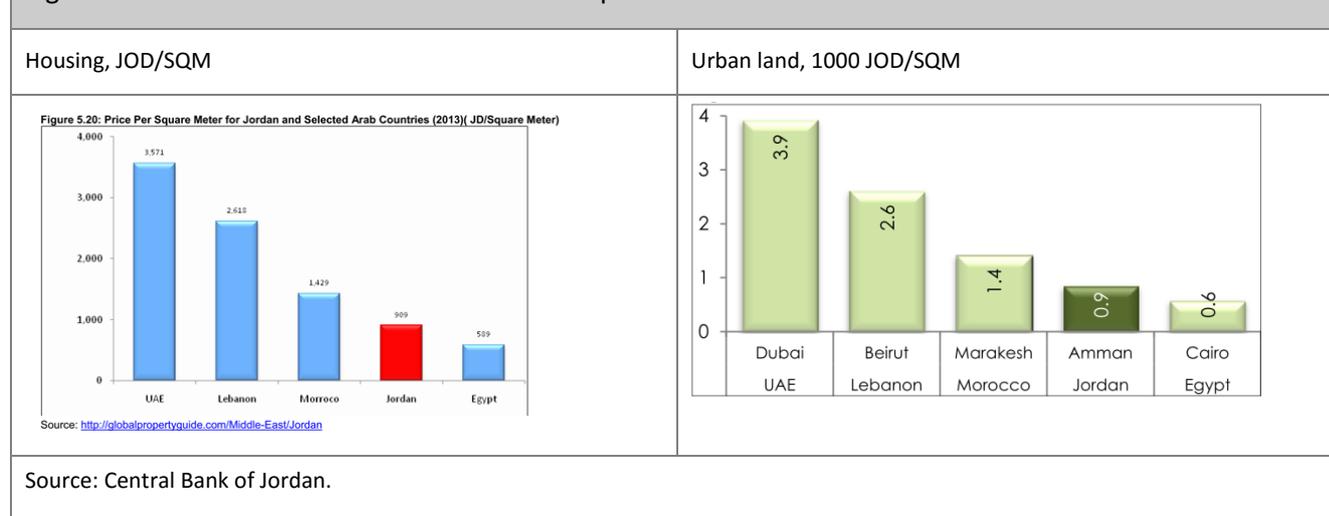


Figure 15: Use of Commercial Banks

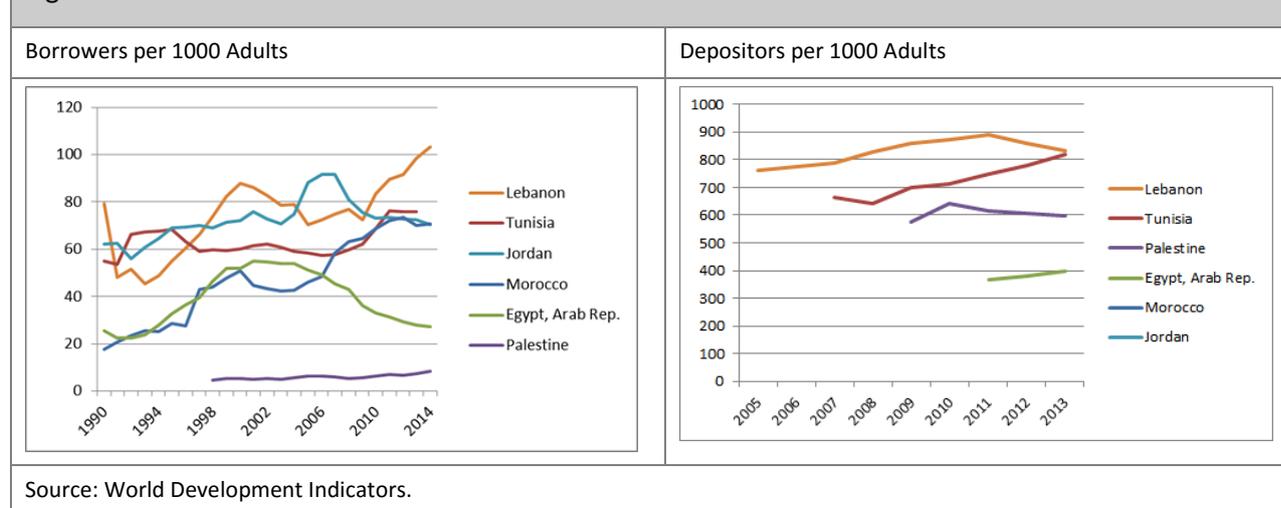


Table 16: Real Growth and Inflation, Theoretical and Actual Lending Rates

	Per Capita GDP Growth			Population Growth			Inflation			Theoretical Interest Rate (Product)			Lending Rates
	1996-2002	2002-2008	2008-2014	1996-2002	2002-2008	2008-2014	1996-2002	2002-2008	2008-2014	1996-2002	2002-2008	2008-2014	2008-2014
Morocco	1.87	3.91	2.45	1.16	1.00	1.32	1.63	2.11	1.08	4.73	7.16	4.93	#NV
Tunisia	3.26	4.23	1.62	1.17	0.97	1.05	2.85	3.53	4.56	7.46	8.95	7.36	#NV
Egypt, Arab Rep.	2.60	3.58	0.88	1.83	1.81	2.12	3.21	9.22	9.95	7.83	15.19	13.27	11.76
Palestine	4.31	-0.55	3.19	2.92	2.64	3.00	4.64	4.38	2.60	12.34	6.54	9.05	6.76
Jordan	1.55	4.94	0.90	2.58	2.33	2.24	1.83	5.76	3.61	6.07	13.57	6.88	8.97
Lebanon	-0.74	2.87	2.43	2.31	2.60	1.70	#NV	#NV	3.81	#NV	#NV	8.15	8.18

Source: World Development Indicators, authors' computations.

Notes: CPI inflation; theoretical interest rate is the product of per capital GDP growth, population growth and inflation using the Fisher equation. Tunisia 2013.

Table 17: Private Sector Credit to GDP and Volume

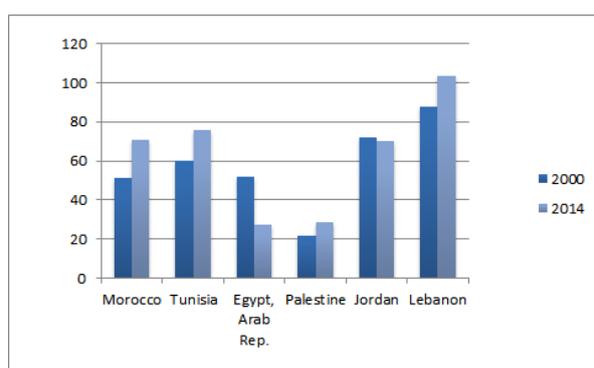
	2000, % of GDP			2014, % of GDP			2014, current USD, millions		
	Banks	Non-banks	Total	Banks	Non-banks	Total	Banks	Non-banks	Total
Morocco	50.73	0.27	51.00	70.49	0.10	70.59	75,431	106	75,537
Tunisia	53.40	6.59	59.99	71.93	3.81	75.74	33,803	1,791	35,594
Egypt, Arab Rep.	51.95	0.00	51.95	27.30	0.00	27.30	78,236	-	78,236
Palestine	5.27	0.00	5.27	8.38	0.01	8.39	1,067	1	1,068
Jordan	71.89	0.22	72.11	70.13	0.09	70.22	25,125	32	25,156
Lebanon	85.49	2.42	87.90	99.20	4.10	103.30	45,367	1,875	47,242

Source: World Development Indicators.

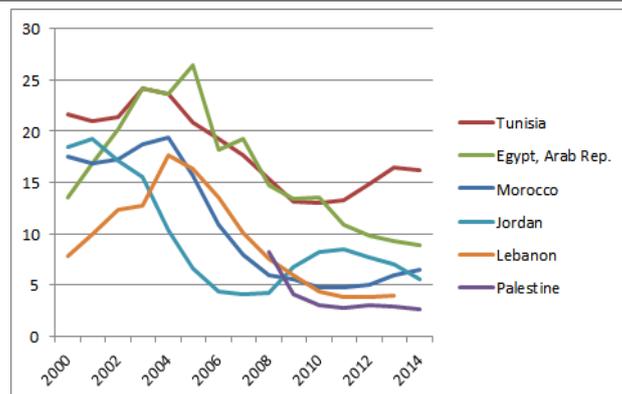
Notes: Tunisia 2013.

Figure 16: Private Sector Credit Volumes and NPL Performance

Private Sector Credit to GDP Ratios



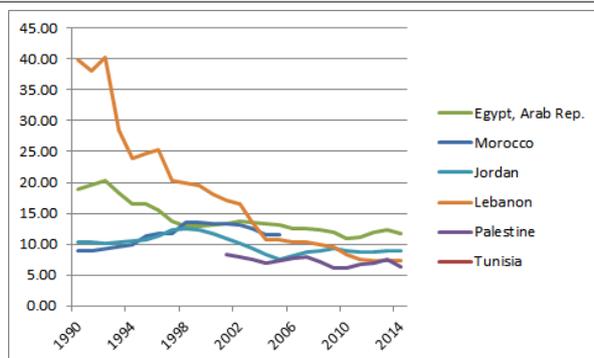
NPL Ratios



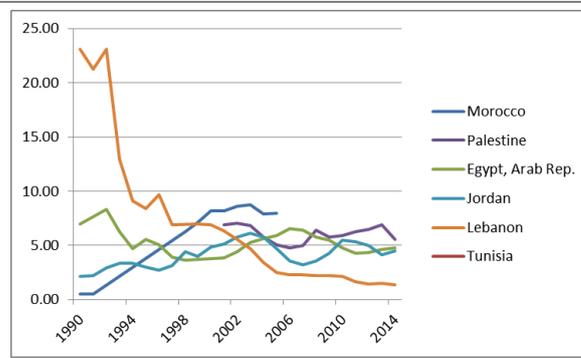
Source: World Development Indicators, authors' computations.

Figure 17: Lending and Spread Conditions in the Focus Countries

Lending Rates



Spread to Deposit Rates



Source: World Development Indicators, authors' computations.

Table 18: Microfinance, Count of Institutions that Offer Housing Loans in the Focus Countries

Country	Year	MFI Count	Products & services > Credit product offering > Non-income generating loans > Non-income generating loan types > Housing loans	
Morocco	2008	4		100.00%
	2009	2		100.00%
	2010	2		100.00%
	2011	4		75.00%
	2012	6		75.00%
	2013	6		75.00%
Tunisia	2014	7		80.00%
	2008	1		100.00%
	2009	1		100.00%
	2010	1		100.00%
	2011	1		100.00%
	2012	1		100.00%
	2013	1		100.00%
Egypt	2014	1		100.00%
	2008	2		100.00%
	2009	1		100.00%
	2010	2		100.00%
	2011	2		
	2012	2		
	2013	2		100.00%
Palestine	2014	3		50.00%
	2007	1		100.00%
	2008	3		100.00%
	2009	2		100.00%
	2010	2		100.00%
	2011	3		100.00%
	2012	9		85.71%
	2013	9		85.71%
Jordan	2014	8		100.00%
	2008	4		0.00%
	2009	5		0.00%
	2010	5		0.00%
	2011	5		0.00%
	2012	6		0.00%
	2013	7		40.00%
Lebanon	2014	7		40.00%
	2008	2		100.00%
	2009	3		100.00%
	2010	3		100.00%
	2011	3		100.00%
	2012	3		100.00%
	2013	3		100.00%

Source: mixmarket.org

Appendix V. Methodology

Table 19: Affordable House Price Calibration, Assumptions

Gross Income USD	Quintile				
	I	II	III	IV	V
Morocco	3530	5335	6934	8840	17289
Tunisia	4435	7194	9453	11924	18854
Egypt	6404	8484	10075	11654	18611
Palestine	7341	10673	13440	16682	27048
Jordan	10884	15147	18712	22805	37574
Lebanon	#NV	#NV	#NV	28486	#NV

Tax rate, %	0	10	15	20	25

Net income USD	Quintile				
	I	II	III	IV	V
Morocco	3530	4801	5894	7072	12966
Tunisia	4435	6474	8035	9539	14140
Egypt	6404	7636	8564	9323	13958
Palestine	7341	9606	11424	13345	20286
Jordan	10884	13632	15905	18244	28180
Lebanon	#NV	#NV	#NV	22789	#NV

Net income USD/month	Quintile				
	I	II	III	IV	V
Morocco	294	400	491	589	1081
Tunisia	370	540	670	795	1178
Egypt	534	636	714	777	1163
Palestine	612	800	952	1112	1690
Jordan	907	1136	1325	1520	2348
Lebanon	#NV	#NV	#NV	1899	#NV

Housing cost to income corrected for av hh size	Quintile				
	I	II	III	IV	V
Morocco	45%	40%	35%	30%	25%
Tunisia	43%	39%	34%	29%	24%
Egypt	50%	45%	39%	34%	28%
Palestine	46%	41%	36%	31%	26%
Jordan	35%	31%	27%	23%	19%
Lebanon	38%	34%	29%	25%	21%
Lebanon	47%	42%	37%	32%	26%

Affordability USD/month	Quintile				
	I	II	III	IV	V
Morocco	128	154	166	170	260
Tunisia	186	241	262	267	329
Egypt	247	262	257	240	299
Palestine	213	248	258	258	327
Jordan	342	381	389	383	492
Lebanon	#NV	#NV	#NV	600	#NV

Affordable house price @ 5%, 30 years	Quintile				
	I	II	III	IV	V
Morocco	20,000	20,000	30,000	30,000	40,000
Tunisia	30,000	40,000	40,000	40,000	60,000
Egypt	40,000	40,000	40,000	40,000	50,000
Palestine	30,000	40,000	40,000	40,000	60,000
Jordan	60,000	70,000	70,000	70,000	70,000
Lebanon	#NV	#NV	#NV	70,000	#NV

Source: World Development Indicators, authors' computations and assumptions.

Notes: Housing cost-to-income ratio is scaled by weighted average household size per quintile divided through cell average household size.

Table 20: Housing Loans vs. Mortgage Loans Calibration, Assumptions

Market Segment		New Building	Extension	Improvement	Purchase	Land	Total	Assumptions
Share in investment	1	56.1%	6.7%	37.2%			100.0%	Jordan 2014
Incl. land and purchase loans	2	47.7%	5.7%	31.6%	10.0%	5.0%	100.0%	5%/10% for land, existing building purchase
Investments with loans	3	70.0%	40.0%	25.0%	40.0%	25.0%		Assumptions
Mortgage loan/total loan	4	90.0%	60.0%	30.0%	60.0%	30.0%		Assumptions
Inv with mortgage loans	3 * 4	63.0%	24.0%	7.5%	24.0%	7.5%		
Inv with other housing loans	3 - 4	7.0%	16.0%	17.5%	16.0%	17.5%		
Inv with cash & other informal	residual	30.0%	60.0%	75.0%	60.0%	75.0%		
Total		100.0%	100.0%	100.0%	100.0%	100.0%		
							Total	
Inv with mortgage loans	rel to 2	30.1%	1.4%	2.4%	2.4%	0.4%	36.6%	
Inv with other housing loans	rel to 2	3.3%	0.9%	5.5%	1.6%	0.9%	12.3%	
Inv with cash & other informal	rel to 2	14.3%	3.4%	23.7%	6.0%	3.8%	51.2%	
Total	= 2	47.7%	5.7%	31.6%	10.0%	5.0%		
							Total	
Inv with mortgage loans	structure	82.2%	3.7%	6.5%	6.6%	1.0%	100.0%	
Inv with other housing loans	structure	27.2%	7.4%	45.2%	13.1%	7.1%	100.0%	
Inv with cash & other informal	structure	28.0%	6.6%	46.4%	11.7%	7.3%	100.0%	

Source: Central Bank of Jordan, authors' computations.

Notes: Scaling factor applied to arrive at retail mortgage lending, as reported in Table 10.

Table 21: Egypt CBE Subsidized Mortgage Funding

	Lowest Income	Lower-Middle Income	Upper-Middle Income
Income limit (EGP/month)	1,500 - 3,000 (\$ 380)	5,000 (\$630)	15,000 (\$1,900) – 20,000 (\$ 2,500)*
Price limit - EGP	150,000 (\$ 19,000)	500,000 (\$ 63,000)	950,000 (\$ 120,000)
CBE lending rate	7%	8%	10.50%
Upfront subsidy EGP	15,000	-	-

Source: Central Bank of Egypt, authors.

Notes: *New bracket introduced in 2016.