

A BOOM BORROWED AGAINST THE FUTURE?

THE PUZZLING EVIDENCE AND LONG-TERM COSTS OF RESIDENTIAL CONSTRUCTION IN ARMENIA

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While the residential construction boom driven by government-supported borrowings in Yerevan causes no doubt, it is hardly evident in economic figures: the construction sector is continuously declining in GDP. In the paper, this inconsistency is explained by 3 key shifts that have happened during the last decade - from private houses to residential complexes, from bigger to smaller homes, and from more expensive to cheaper construction. But even in this case, the long-term costs of supporting the sector expressed in government explicit liabilities are very high (can reach 8% of GDP by 2025), which makes the sector oversubsidized from an economic perspective. This means, that the priorities should be carefully reconsidered based on a cost-benefit analysis, and possibly give a more important role to social or other targets.

The residential construction boom in Yerevan is obvious. According to some estimates, 173 residential complexes are being built in Yerevan currently¹. For comparison, from 2004 to 2009 (well-known years of the construction boom), according to Armstat, only 97 residential complexes were built by construction companies.

The construction boom is noticeable also by other indicators. Construction permits in Yerevan were almost two times higher during the last years compared to average figures of 2014-2018. But the most significant rise has been in

¹ Source: Hetq Media Factory. October 2022.
<https://stepan.carto.com/tables/buildings/public>

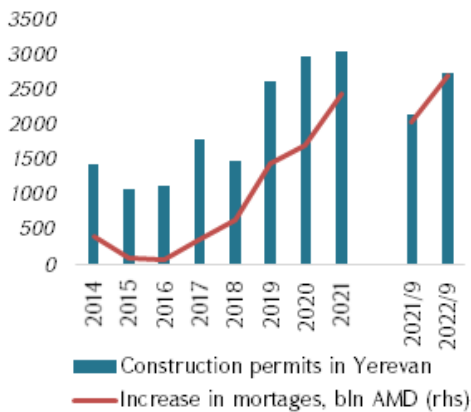


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Source: Yerevan Municipality and the RA Central Bank.

CHART 1

Mortgages in the loan portfolio

mortgage loans: the mortgage loan portfolio in September 2022 is almost 5 times higher than the level of 2014, and its share in the banking system loan portfolio reached 22% from 9% in 2014.

No doubt, that the new boom is driven by significant government subsidies to homebuyers for mortgages². This means, that the level of indebtedness is rising not only for the homebuyers but also for the government, which should compensate a significant part of mortgage interest payments in the future.

This story of a borrowed construction boom seems consistent by now: a booming sector by the cost of increased leverage for the households and explicit liabilities for the government.

But will it continue to be consistent, when we analyze the macroeconomic picture? In 2021 the construction sector accounted for only 6.5% of GDP, while it made up 25.3% in 2008. Moreover, even before large subsidies by the government, the share of construction in GDP was higher – 9.3% of GDP in 2014, and has been continuously decreasing in the last decade.

The simplest implication from this pattern can be, that even with the large flows of borrowed and subsidized money, the trend

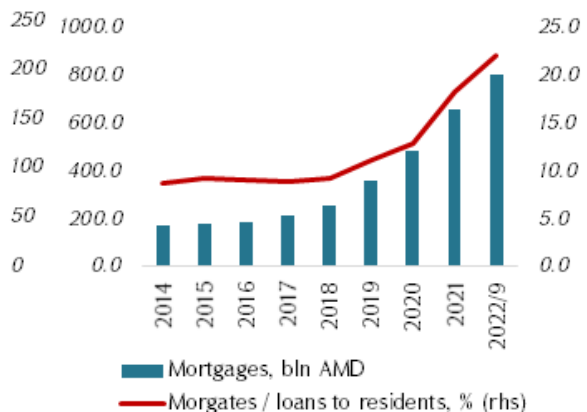


CHART 2

Construction permits and new mortgage loans

of plummeting in the construction sector was irreversible. But what if there were structural changes in the sector, and what will be the picture in that case? And, finally, what are the costs, and what are the benefits of the government support?

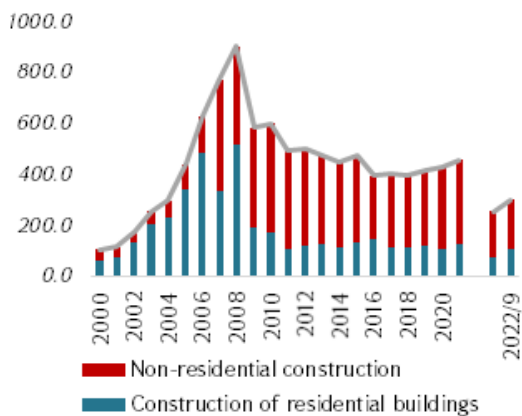
In the first part of the paper, we discuss the structural changes in the sector and continue with cost-benefit analysis in the second part focusing on the long-term costs.

“Shifting while plummeting”: the three key structural changes

The construction sector has many components, and residential construction is one of them (and, actually, a smaller one). The other major components are road construction, construction of industrial buildings, etc.

If the hypothesis on structural changes is valid, we should notice an increase in residential construction and a bigger decline in others. But as chart 3 demonstrates, the structure of the sector didn’t significantly change: although non-residential construction has declined and residential construction grew moderately starting from 2014, the growth of the latter was not even offsetting inflation (chart 3).

² Particularly, in this article as a government subsidy we discuss the income tax return by the amount of interest paid for a mortgage loan on houses bought in a primary market (from a construction company). The program started in 2015, and will be active in Yerevan till 2025 (although the beneficiaries will continue to get the tax return during the whole life of the loan), after which it will be available only in Marzes.



Source: Yerevan Municipality and the RA Central Bank.

CHART 3

Construction in Armenia, bln AMD

The picture is almost the same while analyzing residential construction by area. If during 2003-2008 in Yerevan 1.8 mln m² residential area was constructed, during 2015-2021 constructed area was only half of it – 0.9 mln m² (chart 4).

The bottom line is – the residential construction has actually declined. But to understand the picture by its details, we need to go to the structure of residential construction, too.

The first is geographical structure - by Yerevan and the Marzes (provinces). As

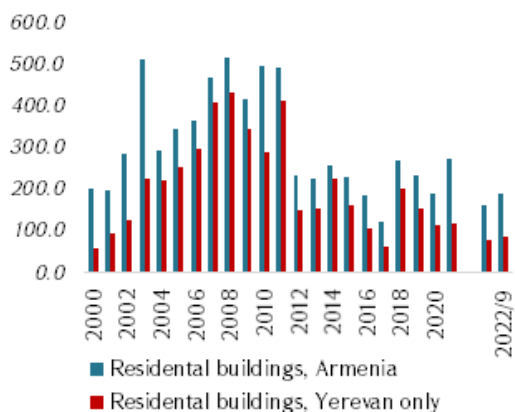
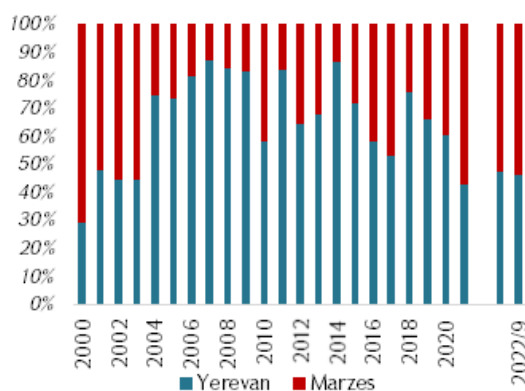


CHART 4

Residential construction, thousand m²

Chart 5 demonstrates, during the last decade residential construction partly shifted to Marzes. While the volume of residential construction in Yerevan is almost 4 times lower compared to 2008, in Marzes it is 2 times higher. As a result, the share of Yerevan declined from 84% in 2008 to 43% in 2021.³

Another important criterion is the source of financing. Residential construction financed by organizations is more typical to residential complexes, while construction financed by individuals is common for



Source: Yerevan Municipality and the RA Central Bank.

CHART 5

Construction in Armenia, bln AMD

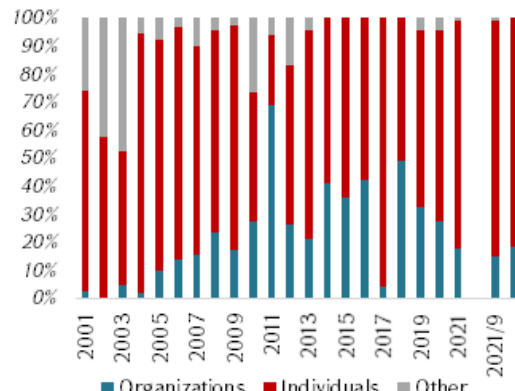
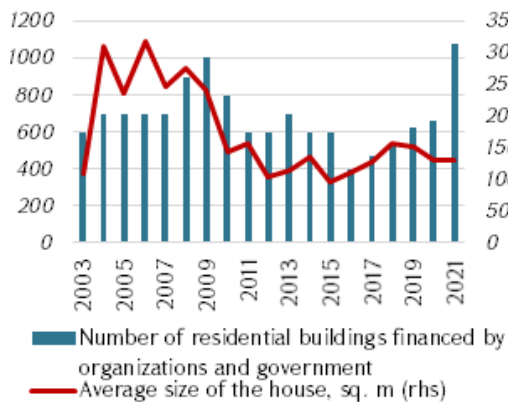


CHART 6

Residential construction, thousand m²

³ The growth of residential construction in Marzes can partly be explained by “Yerevan effect” - new construction near Yerevan.



Source: Yerevan Municipality and the RA Central Bank.

CHART 7

The scale and size of residential construction

private houses. Although in Armenia, most of the residential construction is financed by individuals, during the last decade construction financed by organizations has increased. Particularly, during the booming years of the 2000s overall 310 thousand square meters of residential area were launched, and in 2015-2021 was launched more – 472 310 thousand square meters. As a result, if in 2003-2008 only 12% of the constructed residential area was financed by organizations, in 2015-2021 the figure was 32%.

The short and long term costs of supporting residential construction

The bottom line is - the structure of the construction sector has shifted considerably in the last decade, particularly since 2015. Construction increased faster in Marzes than in Yerevan, while in Yerevan construction has shifted from private houses to residential complexes (1), from bigger to smaller houses (2), and from more expensive to cheaper construction (3). These shifts were accompanied by an overall decline in the sector.

The government subsidy schemes were designed to reverse the declining trend, but they supported the structure shifts. But

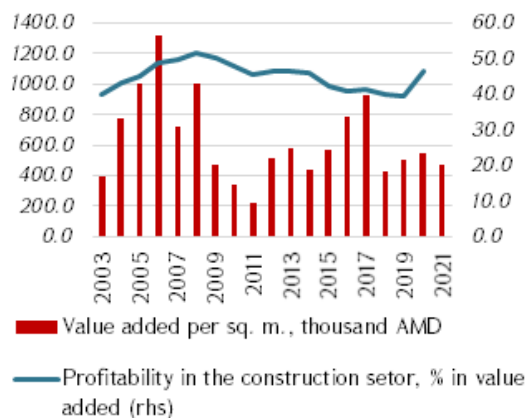


CHART 8

Prices and profitability in the construction sector

do we know the real costs of government support?

The short-term costs are well-known. The volume of subsidies (income tax return) increased from 2.4 bln in 2017 (0.04% of GDP) to an estimated 37 bln AMD in 2022 (0.4% of GDP).

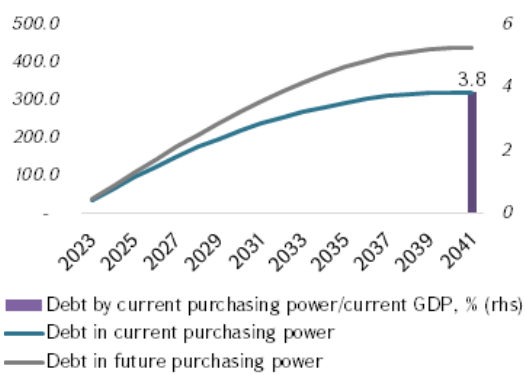
But a bigger portion of the subsidies granted during this period is an explicit liability for the future. We modeled a possible trajectory for future liabilities based on the assumptions of typical mortgage loan characteristics⁴. We also adjusted future payments by expected inflation – to assess their current purchasing power. Following our estimates, while in 2017 the Government assumed liabilities equal to 0.4% of GDP, in 2022 it assumed 1.6%, which raised the overall costs of supporting residential construction to 2.1% of GDP.

All liabilities, accumulated in 2017-2022 are estimated at 440 bln AMD, which should be serviced by 2041. Under current purchasing power, this is equal to 318 bln AMD or 3.8% of 2022 GDP⁵ (chart 9).

Government will accumulate liabilities almost equal to 1 trillion AMD, the present purchasing power of which will be equal to 8% of 2022 GDP.

⁴ Interest rate - 12%, time to maturity – 20 years, loan servicing - annuity of equal payments.

⁵ On the assumption that RA economy will have 11% real GDP growth and 7% growth of GDP deflator in 2022, and till the end of the year the growth rate of income tax returns will be equal to the growth rate of January-September.



Source: Yerevan Municipality and the RA Central Bank.

Note: For calculating present purchasing power for future payments 4% inflation assumption was applied.

CHART 9

Costs of mortgage loans subsidies by current and future payments (adjusted by inflation), % in GDP

CHART 10

Projections of government explicit liabilities on mortgage loans as of the end-2022, bln AMD

Are these costs justified? In 2017-2022 the Government on average spent around 0.2% of GDP on mortgage subsidies, while accumulated liabilities around 3.8% of GDP. For the same period, residential construction was only 1.9% of GDP. In 2021 and 2022 costs of government support are almost equal to the value added of residential construction.

It can be argued, that residential construction should not only be measured by its value added, but also by its multiplier effect on other sectors, which is usually estimated to be quite high. For example, following ILO estimates, investments in construction would yield a 3.5 dollar expansion of GDP per 1 dollar, and up to 500 jobs per 1 million dollars in middle-income countries⁶.

But even if we assume a multiplier that high, residential construction in Armenia is oversubsidized from a fiscal or economic

perspective, as the government can't collect as much taxes to compensate for the current and future expenses⁷. This implies, that the program of support should have a new system of targets and priorities, particularly considering, that construction is a non-exported sector, while the priorities of government economic policies are focused on the exported sector. And, as the biggest portion of expenses is for the future, the deadline for the program in Yerevan for 2025 does not answer this.

These new priorities for supporting the sector may include social or urban development targets. More importantly, supporting schemes of government should incorporate clear cost-benefit analysis – both in the designing and implementation phases. And the key here is – not to miss the future liabilities for the government in the calculation.

⁶ Ernst, C., & Sarabia, M. (2015). The role of construction as an employment provider: a world-wide input-output analysis. ILO.

⁷ The tax to GDP ratio in Armenia is 23%. If 1000 AMD cost is associated to the same volume of residential construction, and the latter has 3.5 multiplier, the Government can collect only 800 AMD of taxes (1000*3.5*0.23).

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Նարեկ ԿԱՐԱՊԵՏՅԱՆ

Տնտեսագիտության թեկնածու,

ՀՊՏՀ մակրոտեկոնոմիկայի և ֆինանսների ամբիոնների դասախոս

ՏՆՏԵՍՈՒԹՅԱՆ ԶԱՐԿԵՐԱԿ

«ԱՊԱԳԱՅԻՑ ՓՈԽԱՌՎԱԾ» ԲՈՒՄԸ. ԲՆԱԿԱՐԱՆԱՅԻՆ ՇԻՆԱՐԱՐՈՒԹՅԱՆ ԽՃՃՈՂ ՓԱՍՏԵՐԸ ԵՎ ԵՐԿԱՐԱՐԺԱՄԿԵՏ ԾԱԽՍԵՐԸ ՀԱՅԱՍՏԱՆՈՒՄ

Երևանում պետական աջակցությամբ վարկերով քարշվող բնակարանային շինարարության բույնը թեև կասկած չհարուցող իրողություն է, սակայն այն գրեթե տեսանելի չէ տնտեսական վիճակագրության մեջ. ոլորտի դերակատարումը ՀՆԱ-ում շարունակաբար նվազում է: Հողվածում սա բացատրվում է վերջին տասնամյակում ոլորտում գրանցված երեք հիմնական կառուցվածքային փոփոխություններով. անցում անհատական տներից բնակարանային համալիրների, չափերով մեծ բնակարաններից՝ ավելի փոքրերի, «թանկ» շինարարությունից՝ «էժանի»: Բայց անգամ այս ամենը հաշվի առնելով՝ ոլորտին աջակցելու երկարաժամկետ ծախսերը, արտահայտված կառավարության ուղղակի պարտավորություններով, չափազանց մեծ են (2025 թ.-ին կարող են հասնել ՀՆԱ 8%-ին), ինչը տնտեսական տեսակետից ոլորտը դարձնում է չափից ավելի սուբսիդավորված: Սա նշանակում է, որ ոլորտի պետական աջակցության առաջնահերթությունները պետք է վերանայվեն՝ հիմնվելով ինչպես ծախսերի և արդյունքների մանրակրկիտ վերլուծության վրա, այնպես էլ դիտարկելով սոցիալական կամ մեկ այլ բաղադրիչի կարևորության մակարդակի բարձրացման հնարավորությունը:

Հիմնաբաներ. *հիպոթեքային վարկեր, պետական աջակցություն, ուղիղ պարտավորություն, շինարարության բազմարկիչ, սոցիալական առաջնահերթություններ*

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ՄԱՅԻՆ ԵՐԿՐԱԿ

БУМ ЗА СЧЕТ ЗАЙМОВ НА БУДУЩЕЕ? ПРОТИВОРЕЧИВИЕ ФАКТЫ И ДОЛГОСРОЧНЫЕ ИЗДЕРЖКИ ЖИЛИЩНОГО СТРОИТЕЛЬСТВА В АРМЕНИИ

В то время как бум жилищного строительства в Ереване, вызванный поддерживаемыми государством ипотеками, не вызывает сомнений, это едва ли заметно в экономических показателях: ВВП строительного сектора постоянно сокращается. В статье это несоответствие объясняется тремя ключевыми сдвигами, произошедшими за последнее десятилетие: от частных домов к жилым комплексам, от больших домов к малым, от дорогого строительства к более дешевому. Но даже в этом случае долгосрочные затраты на поддержку сектора, выраженные в прямых обязательствах, очень высоки (могут достигнуть 8% ВВП к 2025 г.), что делает сектор сверхподдержанным с экономической точки зрения. Это означает, что приоритеты должны быть тщательно пересмотрены на основе анализа затрат и результатов и, возможно, с учетом более важной роли социальных и других целей.

Ключевые слова: *ипотечные кредиты, государственная субсидия, прямые обязательства, мультипликатор строительства, социальные приоритеты*