Tax incentives determine the portfolio of homeowners - insights for the current debate in parliament

Authors: Janosch Brenzel-Weiss (Federal Social Insurance Office), Winfried Koeniger und Arnau Valladares-Esteban (University of St.Gallen)
Date: September 1, 2022
Note: The views, opinions, findings, and conclusions or recommendations expressed in this paper are strictly those of the authors. They do not necessarily reflect the views of the Federal Social Insurance Office (FSIO). The FSIO takes no responsibility for any errors or omissions in, or for the correctness of, the information contained in this paper.

Summary

The Swiss parliament currently discusses two policy initiatives with effects on tax incentives for wealth accumulation. Initiative 17.400 proposes to reform the taxation of imputed rents and the associated tax-deductibility of mortgage interest payments. Initiative 20.494, or the related motion 19.3702, proposes to allow for additional tax-deductible voluntary contributions into pillar 3a of the pension scheme. Our research shows that these two debates are tightly related: households do not fully amortize their mortgage also because contributing to the tax-incentivized pension fund is more beneficial than reducing mortgage debt. The tax deductibility of mortgage interest payments and pension contributions thus need to be discussed jointly.

The impact of initiatives 17.400 and 20.494

In a recent research paper (Brenzel-Weiss, Koeniger and Valladares-Esteban, 2022), we study how tax incentives affect the wealth accumulation of homeowners. We build a structural model that captures the key incentives that homeowners face when deciding their portfolios. Our model accurately replicates data patterns observed for typical homeowners with a mortgage: homeowners do not fully amortize their mortgage until retirement and accumulate a significant share of their wealth in voluntary pension funds. We use the parametrized model to analyze different scenarios in which either both or only one of the initiatives 17.400 and 20.494 are implemented. For simplicity, we focus on initiative 20.494 and do not distinguish possible differences in the quantitative results relative to the implementation of motion 19.3702. Whereas initiative 20.494 proposes to approximately double the annual cap for tax-deductible voluntary pension contributions of employees, motion 19.3702 proposes to leave the cap unchanged but allow for additional tax-deductible voluntary pension contributions if households did not make the maximum contributions in the past.

Results for initiative 17.400

We compare the effects in the different scenarios for a typical homeowner with a mortgage. If the imputed rent and the tax-deductibility of mortgage interest payments were eliminated, while keeping the cap for tax-deductible voluntary pension contributions at its current level, our

simulations show that the typical homeowner would amortize indeed faster on average. This is in line with one of the goals of the initiative. The amortization payments would increase on average, for example, by 32.8% for a homeowner with a mortgage at age 35. Hence, at retirement, the incidence of mortgage debt would be 10 percentage points lower. Allowing mortgagors to deduct interest payments, as proposed at least to some extent in the recent version of the proposal by the parliamentary committee, would reduce these effects by approximately half. Thus, the initiative then would be much less effective in achieving the goal of mortgage debt reduction.

Results for initiative 20.494

If the cap on tax-deductible voluntary pension contributions of employees were increased to twice the current amount, while keeping the taxation of the imputed rent and the tax-deductibility of mortgage interest payments, our simulations show that the effects would be opposite to those described for initiative 17.400. Households would amortize their mortgages at a much lower speed. Compared to the current situation, the amortization payment of a homeowner with a mortgage at age 35 would fall by 68.5%, implying that the incidence of mortgage debt at retirement would increase by 30 percentage points.

Results for joint implementation of initiatives 17.400 and 20.494

If both initiatives 17.400 and 20.494 were implemented jointly, we find that the effects of the higher cap on tax-deductible voluntary pension contributions would dominate. The amortization payment of a homeowner with a mortgage at age 35 then would fall by 33.7%, implying that the incidence of mortgage debt at retirement would be 22 percentage points higher.

Discussion

These results illustrate that the effect of changes in caps of tax-deductible voluntary pension contributions on the amortization of mortgage debt is sizable, so both policy initiatives need to be designed jointly. Quantitatively, the size of the discussed effects depends on how much homeowners value future relative to current consumption. Their patience governs the strength of the accumulation motive and thus how strongly they respond to the changes proposed by the initiatives.

Both initiatives have in common that they increase the incentive to accumulate net worth. Indeed, in our benchmark simulations, net worth is substantially higher at retirement on average. This may seem surprising for initiative 20.494, which implies that mortgage debt is amortized more slowly. The reason is that although mortgage debt increases at retirement if initiative 20.494 were implemented, the increase in pension wealth would be even larger so that net worth would increase.

A further interesting finding is that both initiatives increase the incentives to accumulate net worth. In our simulations, this also reduces the inequality of net worth at retirement, as measured by the Gini coefficient. An important caveat to be kept in mind, however, is that both initiatives are not budget-neutral for the government. If the missing revenue, implied by both initiatives, had to be financed by distortionary taxes, the effect of such taxes on the incentives for wealth accumulation and portfolio choices may modify our findings.

What explains our results?

The intuition behind our results is best explained by imagining a homeowner who would like to accumulate another unit of wealth and considers whether to further amortize the mortgage. The benefit of doing so is that mortgage debt decreases, and hence the stream of future interest payments is lower. The opportunity cost is that the resources used to pay back the mortgage cannot be invested in other assets.

The current tax incentives in Switzerland affect both the cost and the benefit of the homeowner's portfolio decision. The tax-deductibility of mortgage interest payments reduces the benefits of amortizing. At the same time, the tax deductibility of pension contributions implies that the after-tax returns of saving in voluntary pensions are substantial for typical homeowners. As long as the opportunity cost of forgone after-tax returns through pension contributions is higher than the benefit of amortizing, the homeowner will prefer to accumulate wealth through pension contributions over mortgage amortization. Our quantitative simulations indicate that the high after-tax returns of pension contributions dominate the homeowner's portfolio choice.

Conclusion

Eliminating the tax-deductibility of mortgage interest payments, as proposed by initiative 17.400, increases the benefit of mortgage amortization. Our results indicate, however, that for many homeowners, this change is not enough to outweigh the opportunity cost of the high after-tax returns on voluntary pension contributions. Thus, a larger cap on tax-deductible voluntary pension contributions to pillar 3a, as proposed by initiative 20.494, would relax a current constraint in the portfolio choice of many homeowners. These homeowners then would have fewer incentives to reduce their mortgage debt.

Outlook: household debt and economic stability

One goal of initiative 17.400 is to reduce the indebtedness of homeowners. To assess whether this goal is worthwhile, one should consider that debt is only one part of household portfolios and needs to be put into the context of the other asset and liability positions of the household. In countries like Germany, Austria, France, and Italy, homeowners mainly invest in home equity (the difference between the value of a house and its outstanding mortgage debt) by amortizing the mortgage. Hence, for most households in these countries, the main component of net worth is home equity. In Switzerland, instead, households invest less in home equity and more into other assets through voluntary pension savings. On average, Swiss households thus do not have high mortgage debt because they have financed additional consumption, as is the case for many households in the U.S. Instead, Swiss households, on average, amortize less to benefit from other tax-incentivized investment opportunities. Depending on the correlation between house prices and the valuation of these other assets, Swiss households thus may have a more diversified portfolio. The consequences of the larger Swiss household debt in international comparison for economic stability are thus far from obvious.

Reference

Brenzel-Weiss, J., Koeniger, W., Valladares-Esteban, A. (2022): «Tax Incentives and Mortgage Amortization». Working paper.

Appendix: Illustration with a simple example

To provide further intuition consider the following simplified example. Assume an interest rate before tax of r_m on the mortgage, the analogous rate of r_p on pension assets, and r_a on a non-tax-incentivized asset, say a government bond. For simplicity, assume that the considered assets and liabilities have approximately the same risk and $r_m > r_p > r_a$. The return differences are not due to risk premia but rather due to the cost of mortgage intermediation or the illiquidity of pension assets.

	After tax returns	
Mortgage amortization	Contribution to pillar 3a	Investment into non-tax-incentivized asset
$r_m(1-t)$	$r_p + t$	$r_a(1-t)$

Table 1: Immediate after-tax returns for an additional accumulated unit

The choice between mortgage amortization and accumulating non tax-incentivized assets

Consider the portfolio choice of whether to amortize the mortgage or to save in the non tax-incentivized asset. Comparing the after-tax returns in Table 1, $r_m > r_a$ implies that, for *any* tax rate *t*, it is better to amortize rather than not to amortize and save in the non tax-incentivized asset. The after tax-return on amortizing is $r_m(1-t)$ because less interest has to be paid on the mortgage (r_m per amortized unit) but $r_m t$ more tax has to be paid. Taxes have to be paid also for the interest income of the non-tax incentivized asset, however, which has an after-tax return of $r_a(1-t)$. The factor $1-t$ shows in both after-tax returns and thus cancels when comparing the two alternative portfolio choices.

Mortgage amortization hence is better than not amortizing and investing into the non-tax-incentivized asset, as long as the interest rate on the mortgage before tax is higher than for the non-tax incentivized asset ($r_m > r_a$ in the example, as is plausible given intermediation cost for originating the mortgage). Note that eliminating the tax deductibility of mortgage interest payments, as proposed in initiative 17.400, would make amortization even more attractive but would not induce significant changes in household portfolio choices because households should prefer mortgage amortization anyway.

The choice between mortgage amortization and accumulating tax-incentivized pension assets

Let us consider the choice between accumulating tax-incentivized pension assets and mortgage amortization. Comparing the after-tax returns in Table 1, we observe that tax-incentivized pension savings may make it optimal *not* to amortize. The after tax-return on amortizing of $r_m(1-t)$ may

be smaller than the after-tax return $r_p + t$ for the pension asset. Note that the tax deduction of the additional unit of the pension contribution itself provides an additional return through tax savings t. If $t > (r_m - r_p)/(1 + r_m)$, then the after-tax return of accumulating pension assets exceeds the after-tax return of amortizing the mortgage. Thus, a key lever to increase incentives for mortgage amortization is to change the tax deductions for pension savings.

Illustration of the clashing objectives of initiatives 17.400 and 20.494

The simple example shows that if the difference between before-tax interest rates on mortgages and pension assets is small, then every households a positive marginal tax rate prefers pension contributions for the pillar 3a to amortizing the mortgage. These households are hence likely to increase their voluntary contributions to pillar 3a if the cap on them is increased, as proposed by initiative 20.494, and amortize even less than is currently the case in Switzerland, opposite to one of the objectives of initiative 17.400.

Qualifying remarks

Of course, the simple example above abstracts from differences across the considered assets related to liquidity and precautionary savings, from shifts of the tax burden during working life into the retirement age, and from interactions of the cap on contributions to the pillar 3a across different periods of the life cycle. Our quantitative model attempts to capture such issues. The quantitative results of our simulations show that the qualitative insights emphasized in the simple example survive in a more realistic setting.