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MOBILISING SAVINGS FOR INVESTMENT¹

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*Upon the third day this good trader rises,
And on his needs discreetly he advises;
And up into his counting-house goes he
To reckon up his books, as well may be,
For the past year, to learn how matters stood
And what he'd spent, and whether it were good,
And whether he were wealthier than before.
His books and bags, all that he had in store,
He put before him on his counting-board;
He was right rich in goods and rich in board,
For the which cause he bolted fast his door;
He'd have no one disturb him while before
Him stood his books and monies at that time;
And thus he sat till it was well past prime.*

Geoffrey Chaucer, "The Shipman's Tale", *The Canterbury Tales*

Introduction

In the standard model of the macroeconomy, households in aggregate save and firms in aggregate borrow. The entrepreneur in Chaucer's Tale, for whom things did not go so well when he started lending money, is an example of an entity that is both household and firm but also one that counts success in terms of augmenting wealth only. That is not a metric by which we may wish to judge ourselves, as the popular commentary is one of an increasingly indebted nation. In this lecture we shall explore what savings are and how they are mobilised in theory and in practice.

In a closed economy, with no borrowing from abroad, the market for savings will clear at what is now commonly called the natural interest rate. As Wicksell suggested in the early part of the twentieth century the market interest rate charged by financial intermediaries may differ from this natural rate and that might set up large swings in economic activity (on which more later.) The story is rather simple; a household saves an increasing fraction of its income at higher interest rates, because the incentive to defer expenditure is increased. A firm will wish to invest more at ever lower interest rates because the marginal project which becomes less profitable can still "wash its face".

In an open economy, the world interest rate, which reflects the world supply of savings from global households, may lie below the domestic natural rate and that will mean that domestic investment will exceed domestic savings with the marginal savings sourced from overseas with a negative current account balance. So mobilising savings for investment might imply mobilising from overseas as well as from domestic sources, where the net

¹This overview lecture should be treated as a short introduction to many others' research. © Jagjit S. Chadha 2017.



use of the former will tend to deteriorate our net international investment position. But providing firms formulate sensible plans as a result of investment the future returns from the investment ought to be sufficient to pay back those savings, so there is not necessarily a problem on the account of firms or on the national external account.

The Household Model

Let us dig a little deeper. The life cycle model of household consumption says that we wish to have stable levels of consumption over our life times in the face of age (or factor) specific variation in our incomes. In a dynamic setting therefore a household might act like a firm and borrow when young and old, and save in middle age. Under some conditions we might therefore be borrowers in aggregate if we are young or old as a society but not if we are middle-aged. What we want from our savings are sufficient returns to provide us with goods and services at some point in the future. And if we are dissaving we are making a commitment to save at some point in the future, or least inherit from our aged parents.

We can also what changes in interest rates might do in this set-up. An increase in interest rates increases the returns to deferring consumption and so leads to an increase in savings. The consumption function will then tend to tilt. The MPC at the Bank of England last week hoped to take a little demand out of the economy in order to meet its expectation of lower levels of capacity. Furthermore if we can borrow from a richer future, we might increase our levels of borrowing today and these will be paid back when that future arrives. Similarly if we think we are going to be poorer in the future we ought to reduce our dis-saving today because there not be enough in the future pot to pay off that debt. In this framework it is permanent changes in income that induce permanent changes in the level of consumption.

But if these households are constrained in the amount they can borrow for technical or regulatory reasons, what we will notice is that consumption will become more volatile over the life cycle. Similarly if households cannot borrow there will be fewer debt claims but perversely households will be worse off in welfare terms because their consumption will be more volatile. So we should have as much debt as we might need to provide a cushion against temporary shocks to income.

But how do we find the people or firms to whom we want to lend our money? How do the people who want to borrow find us? Standing outside in Chancery Lane asking for money or offering money may well get you arrested. Or at the very least involve you in some very interesting discussions about collateral and the rate of interest! What we need is an institution that we know will return our money but also can enforce payment from anyone to whom it lends.

Banks

The institutions who can both write a contract with depositors to fund their old age and with borrowers that can enforce claims is a bank. They are faced with at least two problems. First, the time horizon of deposits may be short relative to the time horizon of borrowers, and this means that banks are transforming the maturity of savings from short term liabilities to long term assets. As a result their balance sheets are vulnerable to sudden calls on the deposit base. An individual bank facing a fall in deposits, if credible, may be able to source funds from other banks in an interbank market that shares risk. But if all banks face the same risk, the only insurer in town is the central bank that may provide a lender of last resort function.

Banks also face a problem in assessing the quality of any potential borrower. They will not tend to highlight the risks of the loan but also it can be very hard to uncover the true character of the borrower or exclude the possibility that they might just walk away with the loan. So banks typically ask for collateral when making a loan and the value of this collateral places an upper bound on the loan. Unsecured lending is also possible but the quantities available might be limited by previous reputation or previous secured lending behaviour. Banks will therefore charge a premium to reflect the costs and risks of finding borrowers and also may not lend beyond a certain level of risk, in normal times.



So lending seems to be related to the value of collateral, which is pretty close to the idea of asset prices. But there might also be a rather unpleasant form of feedback going on. What if asset prices determine the value of collateral and that determines lending and the availability of loanable funds drives demand for a fixed supply of assets? Surely not.

Investment and Flow of Funds

As we shall see later firms are perhaps not investing enough. But let us remind ourselves of the path of investment growth in the UK in the post-war period. It is a sorry tale of lower growth rates and negative residuals. That is models just continually over-predict the level of investment. There are a variety of explanations involving a lower need for tangible capital in a digital age, the switch of the economy to services, the change in the mix of labour and capital to produce output or simply a reduction in confidence but after the reasons comes the fact – loans are not solely going to firms.

Let us examine the four main sectoral balances: households, firms, the public sector and the rest of the world. We can see that broadly-speaking until the early part of this century, households in the UK were in net surplus and private companies were in net deficit. But since then firms have been in slight surplus and households have been in balance. Something seems amiss if we can believe the numbers. Are firms becoming like households and acting like middle aged savers and are household becoming more like firms?

A framework

If the lender requires a premium then the quantity of loans offered will be less than in its absence. In risky times the premium will increase and the quantity of loans will fall and in less risky times the premia will tend to zero and the quantity of loans will increase. But the increase in lending might not only be increasing the quantity of lending but also reducing the overall quality. The marginal borrower seems unlikely to be less risky than someone who already has received funds. So the movement of the risk premia might well be a very bad signal on overall levels of risk.

The post-crisis development in policy has been to introduce macro-prudential instruments in order to offset this “pro-cyclicality”. And what these tend to do is to reduce the supply of loanable funds at every interest rate and in principle we have both an external finance premium and one directly from MPIS. These extra instruments, and this is phenomenally difficult could be used to offset the possibility of financial pro-cyclicality by being used to restrict or liberalise the availability of loanable funds according to some measures of underlying financial risk. The first set of responses has been to increase the liquidity and the capital holding of banks. The former can start to deal with the maturity transformation problem and the latter the overall riskiness of the bank loan portfolio. Indeed there is some evidence that the costs of bank funding do fall with the quantity of capital employed. Accordingly bank leverage, the measure of assets to capital has started to fall but not to levels that should allow supervisors to get a good night’s sleep.

The UK banking sector is large relative to GDP and also large relative to the US or other financial intermediaries. The four largest domestic banks in 2010 accounted for some 60% of total loans and deposits. And we can also see that the contribution from building societies has fallen markedly since the 1990s. And so we left with banks that have something like the following structure with more household loans than corporate loans.

Household and Corporate Balance sheets

The household balance sheet is in some sense the aggregate outcome of all the kinds of choices we have been discussing. There we can see alongside net wealth of some £10Tn, which gives an average level of wealth of some £380mn per household on average. The average can, of course, be very misleading. On the asset side we can see there is some £5.3Tn of real estate holdings with some £1.6Tn of loans. So although the loan stock is around 90% of the value of whole economy GDP to the extent that it is secured on housing the sector looks



secure. Of course, the observation does not deal with the distribution of debt, income and households with marginal levels of positive equity very well at all.

The non-financial corporate (NFC) sector holds around a third of the real estate of the housing sector at £1.2Tn. And NFC holdings of machinery and equipment are only some 40% of that and this might part is the outcome of the limited investment story. New measure of intangible assets put holdings at just under £0.2Tn. Whilst the sector is sitting on cash of around £0.6Tn, it also has over £1Tn of loans. But only £430bn of that comes from banks. So we have a banking sector that would seem to lend more to households for their property than to firms. Is this what we had in mind when we thought about mobilising savings?

Concluding Remarks

The standard model of borrowing and lending does not really capture patterns in saving and investment in the UK very well. We have three questions to pose of our system of mobilising savings:

- Is lending to households or property crowding out lending to firms?
- Does the financial cycle propagate or amplify the real economic cycle?
- Have macro-prudential instruments limited risk-taking by the financial sector?

Depending on your answers you will make have some views on how to reform our system.

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