**Loan pushing and incentives for sales agents**

Loan pushing is the aim of a creditor with market power to sell a higher volume of credit at a higher rate of interest to a debtor than he would without market power. The market power may stem from a low number of credit suppliers or the formations of a consortium or syndicate of creditors. An example is the consortium of four hundred international banks negotiating with one country. Darity (1986), Eichengreen (1989) and Basu (1991) collect much anecdotic evidence for loan pushing. Introductions in Ziesemer (1997) and Deshpande (1999) contain references to loan pushing and related forms of excessive lending. However, whereas this evidence indicated that there was loan pushing before the 1982 crisis, the evidence after the crisis was that the balance of trade in goods and services had shifted to positive values and credit was limited in order to make sure that interest could be paid. Basu (1991) suggested that this would indicate that there was a shift from loan pushing before the crisis to credit rationing after the crisis. Ziesemer (1997) formalized the argument in order to find the exact conditions under which this holds. A similar pattern can be seen in the current mortgage crisis. Sales agents had aggressively pushed contracts at strangely low interest terms soon to be raised on people with low income. But once the crisis hit, there was a credit crunch as in all earlier big crises.

Why is it profit-maximizing to push loans rather than to ration credit at certain times? There are several answers to this. First, banks make the salaries of sales agents dependent on the short-term profits or on contracts signed. Selling more and at higher interest rates maximizes their salary (Darity 1986). By implication, sales agents are not very much interested in selling contracts, which last for a long time with high probability, but are rather interested in the short term. This could be avoided if more solid practices were more wide-spread, a view recently also supported by Onno Ruding in De Volkskrant. For example, in the insurance sector, sales agents are often paid in proportion to the value of the stock of contracts they have sold. This implies that the revenue for a contract flows to the agent during the time that the contracts hold and seize if the client stops paying premia. By implication, high risk clients are not interesting and the stock of contracts will have a low risk.

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1. This section is based on Ziesemer (1997 and 2007), where the reader can also find simple models explaining the exact nature of this line of thought.
Second, third parties like a firm selling machines to a debtor country paid by use of credit and being a client of the bank(s) may play a role. For example, the client may be a current bad risk, of which the bank can get rid giving the credit (to the debtor country), which is used to increase the revenue when the machines are sold. The bank now substitutes a current (possibly high) risk of the firm by a future (possibly low) risk from the debtor country. Or, more generally, the firm has higher revenue and deposits more money in the bank, thus enhancing expected bank profit. Deshpande (1999) extends the loan-pushing part of Basu’s (1991) model to include a third party and a more general cost function, provides anecdotal evidence, and discusses the role of large and small banks in a syndicate.

Third, an example of illegal activity would be that a bank manager owns shares of the firm, which increases in value if the firm can sell machines to the debtor country. A gain for the manager is exchanged for a risk for the bank.

Fourth, economies of scale and scope of the bank may be valued higher than the new risk from the debtor country, especially if the latter is perceived to be low.

These four arguments indicate that one can easily think of reasons for loan pushing. This may suggest that regulations with adequate monitoring are necessary. Therefore the New York attorney Elliott Spitzer tried to prevent the above mentioned practices before the subprime mortgage crisis. However, the banking supervision in the White House stopped him. The result is the crisis in a financial world with highly indebted financial institutions that has induced Fed president Bernanke to be afraid of financial instability. The chosen strategy leads to a much disputed low interest policy of the Fed and a $187 billion program of the Bush administration. Perhaps it is not too much of an exaggeration for didactical reasons to say that the tax payer now pays a price of $187 billions plus an additional part of the rate of inflation for having avoided banking regulation with the purpose of giving maximum freedom of risk taking to the US banks.

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Sovereign risk and Fixed exchange rates

The theory of sovereign debt starts from the idea that it may be very naïve to expect that credit markets function as in basic models of the capital market. The crucial point is that instead of paying debt service as agreed upon in a contract, the debtor may re-optimize utility and plans and balance fulfillment of the contract against not doing so. Debt repudiation has the obvious advantage that interest and capital is kept by the debtor. Less obvious is the reaction of creditors to this. The harshest consequence once was formulated by Mr. McNamara a former US minister of defense and president of the World Bank: “We will seize their airports and harbors …”. A milder one was proposed in the fundamental paper by Eaton...
and Gersovitz (1981): Exclusion from the capital market for all future would have the disadvantage of foregoing all benefits of international capital movements. More realistically, there would be an increase in the risk premium of future debt contracts in response to a worse reputation as emphasized by Eaton in several papers. Once debtors have made their choice and creditors have a good idea about it, creditors may limit the amount of credit to a rationed volume that makes almost sure that they get their debt service. Only under very bad circumstances debtors may still repudiate. In a different version of Basu (1991) and elaborated by Ziesemer (1997) there is first loan pushing and credit rationing only after the crisis has hit. This latter version seems to be somewhat more realistic.

How do countries run into sovereign risk? The most common way seems to have fixed exchange rates, which one way or another become overvalued after some time without subsequent realignment. In the 1982 debt crisis this happened in the Latin American countries after the increase in world interest rates, induced by restrictive monetary policy and expansive fiscal policy of the USA, caused a world-wide recession with a corresponding fall in the growth of exports of the Latin American countries. In the Asian crisis this happened to Asian countries, when Japan ran into a recession and China had several devaluations (see Ziesemer 1999). In both cases, the fall in exports and the increase in interest on foreign debt generate an overvaluation of fixed exchange rates which was not realigned. Of course there may also be simply national policy mistakes which cause an overvaluation of the currency, because fixed exchange rates are well-known to require subordination of all other policies to the aim of avoiding overvaluation. The consequence of overvaluation is that imports are cheaper and exports are more difficult and a country runs into increasing deficits this way and debt is accumulated more quickly than without overvaluation. An exchange rate is overvalued in this view whenever the central bank spends reserves to satisfy the excess of demand over supply. As reserves are limited this can be done only for some time with and without selling of foreign assets, which are limited too. Then the exchange rate must be devalued. Anticipating this, speculators can make gains and an exchange rate crisis may follow. With lack of liquidity debt service can’t be paid and a debt crisis is the consequence with or without concomitant banking crisis. Besides loan pushing and high indebtedness, fixed exchange rates are a second major condition aggravating any sort of financial crisis.

2. See de Vicente et al. (2008) for an introduction with a trace to old and new literature on currency crises and the textbook by Copeland for a distinction between first, second and third generation models.
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Based on this phenomenon, for debt crises it seems more adequate to search for other methods. For debt crises, Kool et al. (2003), Kool and Ziesemer (2005), Haselmann et al. (2007) analyze the stability of a simple difference or differential equation of the debt/GDP ratio. The underlying idea is that the neoclassical growth model with perfect capital movements - unlike its closed economy version - has its dynamics not in the capital accumulation variable but rather in the debt dynamics as summarized in Figure 1. In case of a stable differential equation with a high savings ratio, the country will end up as a net creditor as in point I. Therefore this regime is called 'stable creditor' (SC). In case of a stable differential equation with a low savings ratio, the country will end up as a net debtor as drawn in point II. Therefore this regime is called 'stable debtor' (SD). In case of an unstable differential equation or regime (U) one would expect that the starting value either to the left or to the right of point III determines where the process goes. However, it can be shown, that only under unrealistically high elasticities of substitution between capital and labour in the production function is it possible to move along the upper right arm. If the elasticity of substitution is unity or lower, this can happen only if the initial value of net debt is larger than the capital stock. Under realistic assumptions on the parameters of the model we must therefore expect that the country moves towards the lower left. This is currently the case for Sweden. In the long run this implies that the country has a national income that has an interest income from positive net foreign assets that is higher than the GDP (Amano 1965). The model is essentially one of a good debtor, because an explosive path of higher and higher debt/GDP ratios can not occur under the assumptions made. If it occurs in the data, we know (i) that the country in question does not behave like a good debtor, and (ii) that the unstable debt dynamics cannot survive in the long run but rather must come to a crash because otherwise debt service would be larger than the GDP in the long run. The market will not want to run into a Ponzi game – defined as getting credit in order to preserve the ability to pay the debt service - and therefore will react to this by imposing a credit crunch or raising interest rates earlier and thereby enforcing a positive current account. A higher interest rate implies lower full employment wages and therefore a real crisis for the country in question occurs. The advantage of the approach of confronting a growth model of perfect capital markets with the data is that one does not have to choose between the many capital-market imperfections modeled in the literature. The most important aspect in predicting a crisis is to find the instability. If the differential equation is estimated for some recent observations one clearly gets an impression of the presence of stability or instability. Haselmann et al. (2007) show that the instability could be seen early on for Brazil and Argentina before the 1982 crisis and for Argentina before the crash of the currency board regime in 2001 using rolling windows, a simple technique using six or seven observations in the regression. Kool et al. (2003) show that all severely affected countries in the Asian crisis also exhibit instability in the data early on. It can be shown that also for the Mexican crisis 1994/95 instability was visible in the data fairly early. The advantage of this simple technique is that one does not have to be an advanced econometrician to handle it, but rather bachelor students can carry it out as a part of course works. Banks using it together with other indicators can reduce their engagement in countries, when seeing that stability properties are changing in the unfavorable direction.
Nobody warns or nobody listens?

There are two often heard complaints after a crisis broke out, both of which are false according to our knowledge.

1. The debt crises of the 1930s, 1980s and the Asian crisis were not predicted by anybody.
2. Nothing has been learned from these crises.

The crisis of 1929/30 had been predicted by many. This can be read in Galbraith (1954). Also the crisis of 1981-3 was predicted by many. In Brookings papers 1977 there are comments on a paper by Solomon (1977), which are obviously full of warnings. Moreover, in Sachs (1981) there is a lengthy footnote citing many warnings. In regard to the Asian crisis the IMF warned Thailand some months before, that their fixed exchange rates would lead to problems (see Ziesemer (1999)). The central problem is not that there are no warnings but rather that there is not much interest in them (see Ziesemer (1999)).

Several lessons had been drawn from the crisis in the 1930s in regard to regulations and there monitoring. But there is also much interest in getting around them or getting rid of them. Hedge funds, which are not strictly integrated in the regulations of the Basel II agreement, are an example. There is only a vague recommendation to national governments to integrate them into the national regulations – implying an obvious coordination problem for the countries. Lessons have also been drawn from the 1981-3 crisis: 1. Flexible exchange rates are better than fixed ones unless one has a common currency. With the exception of the Asian countries which were most strongly hit by the Asian crisis almost all countries had made a transition to flexible exchange rates. 2. Banks from the USA had been more heavily involved than for example German banks, because they were allowed to lend out 35 times their own capital whereas German banks were limited to a factor 18. This boils down to an own capital requirement of $1/35 = 3.2\%$ and $1/18 = 5.5\%$ respectively. In Basel II these own capital requirements have been increased to 8\% with much attention to the risks from debtors. The problems with including hedge funds are discussed in ECB (2005). Moreover, from these and other crises, in particular banking crises, the lesson has been drawn to include ‘asset inflation’ into the Taylor rule.

Conclusion

Loan pushing and fixed exchange rates may lead to unstable debt/GDP dynamics. The relevant lessons are only drawn in terms of logic. Sales agents should have contracts rewarding them in proportion to the stock of contracts they have sold, not per single contract. Regulations are highly controversial. Those who have a high inclination to speculate with money, which is not always their own, often have an interest in ignoring these lessons. These interests also feature prominently in agreements like Basel II and the hesitant implementation in the nation states. Other lessons have been drawn as well. In particular, it is possible to get early warnings on debt crises. But the willingness to listen to these warnings is likely to remain limited as long as risk-aversion is not a dominant property in financial management.
Literature