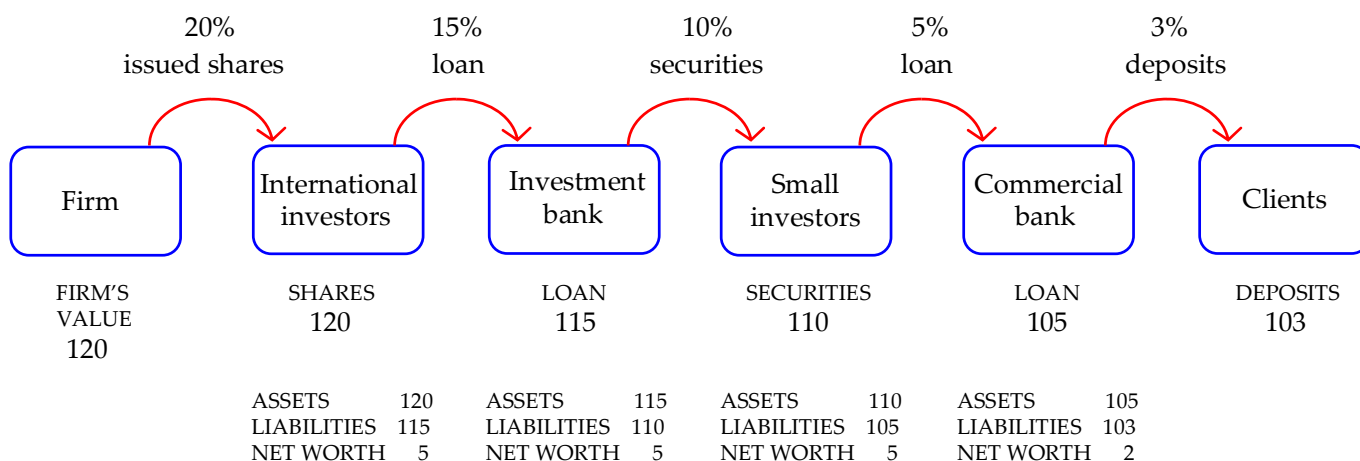


ORIGIN OF A FINANCIAL CRISIS IN THE FORM OF AN EXAMPLE

The example also illustrates the fragility of the financial side of the economy and its power to amplify (in either direction) the outcomes generated in the real side of the economy. In fact, when the economy booms, the activity carried out in the financial side contributes to make the boom bigger. Conversely, when the economy suffers from a recession, what takes place in the financial side may worsen the recession. The following sketch represents the example.



- Stage 1. There is a firm worth 120 (million €). The owner plans to carry out an investment project to improve the productive capacity of the firm or, alternatively, to offer a new product that is estimated that consumers will appreciate and demand. To make the situation more realistic (dramatic), imagine that the firm's survival depends on the success of the investment project. To raise the necessary funds, the owner issues shares of the firm corresponding to the 100% of its value. To make the shares attractive, the price of the shares (100) is set below the worth of the firm (120). A group of international investors is interested in those shares and agree to purchase. Accordingly, the investors get a 20% rate of return, as they buy at price 100 something whose actual value is 120.

- Stage 2. Yet, the international investors run short of cash. Each one of them therefore decides to ask an investment bank for a loan. The bank receives requests for a total amount of 100. The bank knows the firm's real value and the price of the shares and, consequently, knows that the investors are getting a 20% rate of return. In view of this, the bank grants the loans to all the investors at a 15% to be given back in one year.

- Stage 3. But the bank is also short of liquidity and does not possess the amount of 100 demanded by the investors. So the bank securitizes the loans to the investors by issuing shares to be sold among small investors. The bank's offer is that, in exchange for purchasing all the shares for a price of 100, the bank will repurchase them in a year for a price of 110. The resulting rate of return for small investors as a whole will be the 10%.

- Stage 4. Unfortunately for them, the small investors are broke: they have nothing to pay for the shares. But knowing that commercial banks charge a mere 5% for a loan, they ask for one of 100 to be given back in one year. Once the amount of 100 is obtained from the bank, the small investors buy the shares, so that the investment bank may transfer the amount of 100 requested by the international investors, who finally use that amount to purchase the firm's shares.

• Stage 5. Perhaps by now not surprisingly, the commercial bank's vault is empty. Hence, before all the above happiness unfolds, the commercial bank has to obtain funds. The bank sets a campaign among preferential clients: yearly deposits rewarded with a 3%! The campaign is successful and the bank collects the amount of 100 allowing the small investors to purchase, the investment bank to loan, the international investors to purchase, and the firm's owner to invest.

The above sketch shows the sequence of events. For banks and investors, the result of the transaction is indicated. International investors purchase shares worth 120 and get themselves into debt for an amount of 115. The net worth is 5. The investment bank grants a loan that, in one year, is expected to generate a value of 115 and, in exchange, gets itself into debt for an amount of 110. The net worth is also 5. Small investors own financial assets valued in 110 at the maturity of the loan: net worth 5. Finally, the commercial bank has granted a loan of 105 and has, simultaneously, assumed the compromise of paying 103 to depositors: net worth amounts to 2. To sum up, everybody's net worth is positive: all the participants in this sea of transactions make a profit. Even the owner of the firm, who obtains the needed funds, and the preferential clients, who get a 3% rate of return from their deposits. The whole story makes evident the power of the financial side of the economy to magnify outcomes: thanks to the intervention of the financial side, the firm's expansion generates profits for investors, banks, and depositors.

The example also illustrates the leverage effect caused by the financial side: there are assets in the economy worth 553 (shares, 100; loan from the investment bank, 115; securities owned by the small investors, 110; loan from the commercial bank, 105; and deposits, 103) all backed by the firm's value: just 120. Therefore, the value 120 lifts 553. This is a phenomenon similar to the one underlying the money multiplier: in the example displayed in class, an increase of 24000 in M1 was sustained by a mere increase of 6000 in M0; in the case at hand, a financial wealth 553 is sustained by real wealth (wealth generated in the real side) of 120.

The other side of the story

Leverage also has a dark side, as it extends and multiplies weaknesses and risks. In fact, it all depends on the success of the investment project by the firm. Indeed, what would happen if the project failed? To make the situation more bizarre, imagine that the clients lending the money to the commercial bank are the only ones willing to buy, with the money they deposit on the bank, the firm's new product. Hence, once they deposit the money on the bank, there is no demand for the firm's new product. Suppose this causes the firm to go bankrupt. Unfortunately, the fall of the firm makes everyone fall.

If the firm goes bankrupt, shares become worthless. Accordingly, international investors have nothing to settle their debt of 115. Since those investors cannot repay the loan to the investment bank, the bank cannot repurchase the securities from the small investors, who in his turn cannot repay the loan to the commercial bank, which is then unable to give back the money to depositors. In a word: everybody loses. And who must be blamed for this?

The last losers in the sequence (depositors) may wonder where their funds have gone. Answer: the firm made use of them, to finance an unsuccessful project. Should then the natural conclusion be that the fault is all on the firm? Whatever the answer, consider the case in which the firm goes bankrupt because of an unpredictable and inevitable accident. The outcome is the same (everybody loses). But is it fair to say that it was the firm's fault?