A Simple Model with Private Bank Money

7.1 Private money and bank loans

As pointed out earlier, money is created in two fundamentally different ways. In Chapters 3–6, we only dealt with government money – indifferently called high-powered money, central bank money, cash money or outside money. This kind of money had a peculiar characteristic: it carried no interest yield. It is now time to introduce private money, that is, the money created by private banks. Although private, or commercial, banks could also print cash money or banknotes, as they indeed were allowed to do in the past before central banks were awarded the monopoly, we shall assume that all private money takes the form of money deposits. We shall further assume that these bank deposits carry an interest yield.

In previous chapters we saw that the creation of government money was associated with government deficits. In the case of private money, the creation of money is tied to banks granting new loans. Although loans could be granted to firms, households or the government sector, we shall suppose, at least initially, that all loans are granted to production firms. These loans carry an interest yield, which must be paid by the firms which have borrowed from the banks. The reader may wonder why private money has not been brought into the picture any sooner. These interest payments, which must be made by firms, are the major cause. They add some complications to the accounting framework, complications that did not exist when only the government sector had to make interest payments on its debt.

Why do production firms need to borrow from banks? Why are firms in debt vis-à-vis the banking system, whereas there was no such debt in the previous chapters? The previous chapters described a service economy, where no capital goods were required for the firms to produce. This service economy was a kind of pure labour economy, where labour was the only input. Production did not require fixed capital, and it was assumed that all...
services could be produced on demand, without any need to hold inventories of goods or services. In a sense, production was instantaneous; it did not require time. These simplifying and artificial assumptions allowed us to move quickly forward in Chapters 3–6. They allowed us to circumvent relatively difficult accounting problems, such as cost accounting, inventory accounting, inflation accounting, as well as delicate economic questions, such as investment behaviour and the distribution of property income. It is now time to face some of these real-world problems. In the real world, firms require fixed capital and working capital. As a result, they need to borrow from private banks.

In this chapter, we present the BMW model, the simplest bank-money world model. There is only one kind of financial asset, the money deposits held by households, and only fixed capital expenditures will be taken into account. This will allow us to circumvent, until the next chapter, the complications associated with inventories valuation and inflation accounting.

### 7.2 The matrices of the simplest model with private money

#### 7.2.1 The balance sheet matrix

As usual, we start with the balance sheet matrix of Model BMW—the simplest model with private money. The entire public sector has been assumed away, so as to concentrate on the workings of the private economy. Thus both the pure government sector and the central bank have been taken out of the matrix. We have also reverted to a closed economy. We assume that households do not borrow, and that they accumulate all their savings in the form of money deposits. Reciprocally, we assume that firms do not hold money balances, and that they borrow from banks to finance their new capital expenditures. Finally, we assume, for simplicity, that neither the firms nor the banks have any net worth. This means, by implication, that no asset revaluation has taken place in the past. In other words, prices have been assumed to remain constant. Indeed, in the equations of the model, the price level will be a constant, set equal to one.

All these assumptions are reflected in the balance sheet matrix of Table 7.1. As usual, all rows related to financial assets or liabilities sum to zero. This is the case of the \( M \) row, which deals with money deposits at banks; and it is also the case of the loans taken by firms, the \( L \) row. By contrast, the row relevant to tangible capital, the \( K \) row of fixed capital, does not sum to zero. This is a phenomenon that we observed in Chapter 2, when balance sheet matrices were first presented. Tangible capital appears in the assets of production firms, but they are not counterbalanced by the liabilities of another sector. Tangible capital is only an asset; it is not simultaneously an asset and a liability, as is the case of financial capital.