

Chapter 10 extends the classical approach to the theory of finance. The interest rate is the price of finance, financial firms exist to make profit, and competition makes the profit rate of the regulating financial capitals gravitate around the general rate of profit. From this point of view, the competitive interest rate is the “price of provision” of finance and is linked to the general rate of profit just like any other competitive price. For both financial and non-financial firms, the interest rate serves as a benchmark for investment. As both Marx and Keynes emphasize, investment is driven by the difference between the rate of profit and the rate of interest. In this chapter, I focus on the competitive determination of interest rates and bond and equity prices, leaving monetary policy issues to chapters 15 and 16. Section II begins by noting that the interest rate must generally be less than the profit rate if business borrowing is to be viable. The profit rate of a financial firm (bank) is the ratio of its profit (which is the difference between its interest revenue from loans and its costs of operation) to its capital stock (which is the sum of its reserves and its fixed capital). The equalization of the bank profit rate to the general rate of profit implies that for any given desired reserve-to-deposit and deposit-to-loan ratios the interest rate is determined by two things: the general rate of profit and the general price level that affects the costs of inputs such as paper, computers, office space, and labor time. Hence, the long-run competitive interest rate is not a “natural” rate because there will be a different long-run rate at each different price level. This provides a direct explanation for “Gibson’s Paradox” arising from the empirical finding that the nominal interest rate and the price level are positively correlated—in direct contradiction to Fisher’s hypothesis that the interest rate moves opposite to the rate of inflation. It also resolves an apparent contradiction within Marx’s argument, in which he vehemently opposed the notion of a natural rate of interest and yet says that financial capital, like all other capital, must participate in profit rate equalization. He is right on both counts. The approach is then extended to derive the yield curve in Hicksian fashion, starting with the bank or division that takes in demand (zero-period) deposits to make one-period loans, moving to the one that takes in one-period time-deposit to fund two-period loans, and so on. Longer loans have greater risks and therefore require higher reserve and deposit-to-loan ratios, so that the interest rates on longer term loans will have to be higher to achieve the same profit rate: the profit equalized yield curve will normally be upward sloping. Profit rate equalization therefore determines the long-run level of the base (one-period) interest rate and the long-run term structure of interest rates. In the short run, demand and supply for various types of loans determine interest rates, but in the long run, structural factors dominate.

Section III extends profit rate equalization to equity prices. Here competition equalizes the real rate of return on equities, which is sum of the rate of growth of real stock prices and the dividend yield (ratio of dividends per share to price per share), with the real incremental rate of profit. This determines the path of real stock prices in a dynamic context. Various standard hypotheses such as the dividend-discount and FED models of the equilibrium stock price are shown to obtain as improbable special cases of the general classical theory. Section IV analyzes bond prices. Arbitrage between financial instruments equalizes bond rates of return with bank interest rates of equivalent duration, and since these bank rates are generally smaller than the general rate of profit, bond rates of return will be below the profit rate. Since equity rates are equal to the profit rate, the bond rate of return will be lower than the equity rate. This is a well-established empirical fact known in orthodox finance theory as the “equity premium puzzle” because it contradicts the hypothesis

that bond and equity rates of return should be equal. Section V summarizes the classical theory and shows that in the stationary case it reduces to the standard dividend-discount model except that the “discount factor” is the profit rate, not the interest rate.

Section VI considers the empirical evidence. The current-cost (real) incremental rate of return on banking capital is shown to gravitate around the general incremental rate on all private capital, as expected by the hypothesis of profit rate equalization for banks. Bond yields are shown to equalize with bank loans of interest, and interest rates of different duration are shown to move together except in abnormal times such as the outbreak of the global crisis in 2007. On the other hand, the bank prime rate on business loans is shown to be generally below the profit rate, except during the last part of the Great Stagflation in which a combination of high inflation and bank and business failures drove up the interest rate. This leads directly to the empirical connection between the nominal interest rate and the price level which is visible from 1857 to 1982, after which monetary policy intervenes to drive the nominal rate ever downward (see chapter 16). By contrast, the Fisherian real interest rate (the nominal rate minus the inflation rate) is definitely not stable, contrary to the expectations of orthodox finance theory. In keeping with classical expectations, the equity rate of return and the corporate incremental rate are very similar, down to having essentially the same means and volatility. Also in keeping with the expectations of classical theory, the bond rate of return is only half of either of the other two rates (tables 10.1 and 10.2). Finally, in the classical argument the average rate of profit is not expected to equal the equity rate of return because the average rate is a mixture of rates of return on all vintages of capital. The appropriate measure is the real incremental rate of profit, which is shown to equalize with the real equity rate. Shiller’s critique of the Efficient Market Hypothesis (EMH) is addressed from this vantage point. The comovement between the equity return and the increment corporate rate of return is so close that there is no basis for Shiller’s claim that the stock market return is characterized by “excess volatility” due to the “irrational exuberance” of investors. Shiller arrives at his “excess volatility” conclusion because he takes the ruling Efficient Market Hypothesis (EMH) as the benchmark, and this requires the assumption that the expected stock market rate of return is constant through time. But the actual stock market rate is highly volatile, so any comparison between it and some constant rate of return is bound to signal “excess volatility” (figure 10.12). The difference between the classical and EMH hypotheses carries over to the definition of the long-run equilibrium (warranted) stock price: in the EMH case it is smooth and quite “out of touch” with the actual real price; in the classical case the actual and warranted prices cycle turbulently around each other in long swings consistent with the theory and particularly with Soros’s notion of reflexivity which is itself a critique of the EMH.

Section VII traces interest rate theories from Adam Smith to modern views. Smith, Ricardo, and Mill treat the long-run interest rate as proportional to the profit rate. Such a relation can be derived from the general argument in section II if one abstracts from operating costs and fixed capital in banks. But then there would be a “natural” rate of interest at each level of the profit rate—something which Marx rightly opposes because he was aware of Tooke’s finding that the interest rate is also related to the price level. At the same time, Marx argues that financial capital also enters into profit rate equalization, and he even links financial profits to the difference between the interest rates at which they borrow and the rate they charge on their loans. In Volume 3, assembled by Engels long after Marx’s death, there is no further treatment of the equalization of bank profit rates or of the term structure. On the neoclassical and Keynesian side, the striking thing is the treatment

of finance as if it were a non-capitalist activity with neither operating costs nor capital advanced. Once costs and capital have been abolished from the picture, there is no possibility of a price of provision for finance. Then we can only anchor the interest rate in preference structures and expectations. Keynes turned to liquidity preference as the driver of his argument, and this quickly devolved into Hicks's IS–LM apparatus which was in turn suitably modified by neoclassicals to ensure full employment through the putative real balance effects. The neoclassical takeover of the IS–LM framework forced Keynes's followers in a variety of alternate directions. Wray insists on keeping liquidity preference as a foundation, while Panico argues that liquidity preference is insufficient to determine the interest rate because, in the end, this relies on “the common opinion” in the market. On the other hand, Rogers celebrates this conclusion by arguing that the interest rate is indeed purely conventional. Moore contends interest rates are set by central banks (which, however, says nothing about interest rates before central banks) through appropriate adjustments in the money supply. Lavoie and Wray confirm that this is now the consensus view in post-Keynesian economics. At the other end, Panico's pathbreaking work recovers the classical analysis of the bank interest rate as a cost-based competitive price derived from the equalization profit rates. It is analyzed in some detail and provides the foundation for my own approach, albeit along somewhat different lines.

Section VIII concludes chapter 10 with a discussion of modern finance theory whose central hypothesis is that the mobility of capital equalizes risk-adjusted rates of return. This includes Markowitz's return–risk trade-off, the approximate equality of risk-adjusted returns in the Capital-Asset Pricing (CAPM) and Arbitrage Pricing Theory (APT) models, and the stochastic equality between expected and actual returns in Efficient Market Theory (EMT). The latter is based on the hypothesis that the price of an asset must reflect all available information because if it did not there would be a profit opportunity which would attract speculative capital. The ubiquitous dividend-discount model, in which the equilibrium price of a stock is said to be equal to the discounted present-value of the expected stream of dividends, is shown to derive from this same principle provided we assume that future rates of return are expected to be constant over time and that dividends per share grow at some constant rate lower than the rate of return. Outside of academia, most practitioners focus instead on earnings, not dividends. For instance, there are literally hundreds of models based on benchmark price–earnings ratios including the FED model derived in section V as a special case of the classical formulation. None of these models work well at an empirical level.