

Austrian Interest Concepts and the Great Recession

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“Perhaps more fallacies have been committed in discussions concerning the interest rate than in the treatment of any other aspect of economics.”

--Murray Rothbard

A. Some Basics: Interest Rates

Interest rate theory offers a framework for understanding how an economy functions. Close analysis explains why the underlying interest rates seen in markets are low in some years—such as the near-zero short-term rates from 2010 to 2015—and high in others—like the nearly 20% rates in 1980.

We will outline a generally agreed-upon description of interest rates and the forces that influence their changes. Controversy stems from misunderstandings about the ultimate forces that affect interest rates and how other economic measures interact with them, such as the desire to invest, spend, or hold money balances.

Financial professionals, lenders, and borrowers aim to stay informed about current factors affecting interest rates. Knowledgeable observers recognize the Fed’s ability to disrupt rate trends, especially short-term rates, but understand that, generally speaking, except during financial crises, Federal Reserve Policy only appears to independently set absolute rates for the economy rather than simply influencing them. We will see that rates, adjusted for price inflation as seen in loan markets, ultimately mirror broader economy-wide production and asset price differentials dispersed over time.

What is interest? Popular usage portrays interest as the price of money, determined by the supply and demand for money. This is inaccurate. Trained economists state this more precisely: They define the interest rate as the premium or cost of borrowing, or the time price of money.

Clearly, the price of money is its purchasing power, the conceptual inverse of the weighted prices of goods and services, not interest rates. The price of a building may result from the present value of its stream of discounted future rental income; it is not its yearly rental income. The price of money cannot equal its yearly rental value, which is the rate of interest. The desire for money balances can be neutral or non-neutral with respect to changes in interest rates, and similarly for prices, because the use of money is ultimately governed by its exchange for goods and services.

Interest and demand for money

Standard economic models employ various interactive variables that determine the interest rate. It is specified as a function of the supply and demand for money balances, with interest, in turn, affecting the motives to hold money balances.

By contrast, we highlight the classical view among Austrian writers that the supply and demand for money, rather than primarily determining the interest rate, largely determine the price level (loosely defined) under various credit conditions. DSGE (dynamic stochastic general equilibrium) models treat the interest rate agnostically as a common variable across equations throughout the model, without addressing its underlying formative properties.

Principles courses properly designate the supply of money as money balances outstanding, with the demand for money being the propensity to hold these balances. However, as we will see later, the demand for money is often incorrectly described as the inverse of the velocity (or turnover) of money. Rather than the rate of turnover, the degree of subjective preference for money versus goods matters for prices. Velocity is an inappropriate term for this phenomenon.

Interest, prices, and time preference

Money prices reflect more than timeless or present (marginal) utility considerations; they relate the disposition of goods in terms of present value to future returns reduced by temporal discounting (time preference). For example, volume discounts can include a price discount today for goods to be used later.

Goods are also subject to a time value specific to each good. This is in addition to time preference. Ice in summer has a different time value than ice in winter. For a specific good, time value may dominate time preference.

Money is different. Money does not change in its time value, so it can reflect social time preference.¹

The interest rate links current money to future money, and when it excludes premiums for risk or price-inflation, it reflects social time preference.

Ratios of present versus future prices underlie the Pure Time Preference Theory of Interest (PTPT) employed by key Austrian economists. However, to isolate the time-preference element, the comparison is between the universal bartering good — the money unit — in its present and future uses.

We will see that it has been argued that the rate of price inflation can be appended as a premium to augment the basic rate of interest, but it is this basic rate, absent this premium, that interest rate theory must explain.

The prevailing theory employs investment prospects, specifically the productivity of capital or the marginal efficiency of capital, to help explain credit demand.

Key Austrians challenge this productivity explanation for determining the basic interest rate. They point out that investment rates of return cannot be used to determine the interest rate when investment values have already been discounted at that same rate. Mises, in particular, rejected the neoclassical formulation of the investment demand function. Such a view is unique to Austrian economists.

The marginal productivity of capital is a return per annum. It is problematic to depict it as an investment demand curve in the interest rate markets. An individual can act both as a supplier and a demander of present goods. For example, one can run a balance on a credit card (a form of borrowing) and simultaneously own shares in a bond fund. In our analysis, these don't cancel but enter into both the market demand and supply schedules. An employee, a demander of present goods (income), can be, and often is, at the same time, also a capitalist supplying savings to the market, a present good. Rothbard states, "The same person can be at once a laborer, a landowner, and a capitalist in the same period of time."²

Time market vs. loan market

The general, yet mistaken, attachment of importance to the entrepreneur as the relevant agent behind demand for loanable funds should come as no surprise. Certainly, the importance of the entrepreneur as an efficient allocator of productive activity has been too long underplayed.

¹ Herberner (2011) attributes this understanding to Frank Fetter.

² Rothbard (1962) p355

Yet the entrepreneur is not at the center of interest-rate determination. Speculation, when contributing to the coordination of the economy by speeding adjustment to change, constitutes part of the entrepreneur's indispensable role in taking on the risk and reward of profit and loss.

Austrian theorists such as Mises and Rothbard stress the intermediary role of the entrepreneur as players in the time market. For these key writers, the time market, not the loan market, governs interest rates.

Most observers of financial markets naturally view interest as emerging from the interaction of supply and demand in loanable funds. As a habit of thought, for those who think about the financial markets, supply and demand curves for loanable funds seem to interact so that a rate of interest is hammered out. Most view the time market as being subsumed within the loan market. However, we will see how our key Austrians distinguish between the time market and the loan market.

When it comes to decisions that holders of productive assets (capital goods) exert on markets and the economy, a sound grasp of the differences between the loan market and the time market matters, especially when it comes to defending either Austrian or neoclassical Keynesian capital theory, as will be illustrated later in this discussion. Terminology can be blamed for some lack of clarity on this point.³ Rothbard (1962) conveyed the essence of the Austrian view on the business cycle with a succinct critique of standard Keynesianism. F. A. Hayek wrote extensively on this subject, but without explicit endorsement of the time preference theory of interest, maintaining that the central bank's lowering of the current rate of interest below the equilibrium market rate during monetary expansion operates to produce the business cycle, irrespective of the ultimate determinants of the interest rate (Hayek 2012: 126). Garrison (2001) used what is largely the *time market* as a key element in his model, but denoted it as the *loan market*.

B. Interest and Inflation

We note that abstract reasoning facilitates analysis and that economic models necessarily simplify by employing assumptions.

We have noted that models may abstract too much; they can overlook stages in the chain of business activity, such as those extending from resource extraction to manufacturing and processing, and from processing to wholesaling and retailing. Such amalgamation into a single process obscures details crucial to the Austrian dynamic analysis. As a result, it is easy to overlook the importance of maintaining the great structure of production through the ongoing process of reinvesting and saving. Mental constructs easily overlook the importance of not consuming and the need for savings to channel funds into business activities that are the precursors to consumer goods. Models may employ assumptions that obscure the impacts of changes in money and credit flows and interest rates. They may overlook the distorting effects of credit expansion on the profile of the structural edifice in the economy, an edifice comprising, in part, multi-enterprise, vertically un-integrated, sequential stages of production.

³ Mises preferred to use the term *inflation* to indicate increases in money or credit not counteracted by increased demand for money balances. Inflation connotes *expansion more so than mere rising*, and so Mises' view is well taken. We must, however, acknowledge the conventional use of the word to mean rising prices. For clarity, we will sometimes speak of price inflation and of money inflation.

Austrian writers emphasize these temporal and spatial structural elements. The Austrian Business Cycle Theory (ABCT) highlights the inadvertent, asymmetric, yet systemic economic distortions resulting from monetary policy.⁴

Standard Neoclassical treatment of interest rates employs averages, such as the average *price-inflation rate premium, in the loan market interest rate*. F.A. Hayek cautioned that the use of macroeconomic aggregates and averages was at the root of monetary policy's failure to progress. Essential understanding can begin with such concepts, but average prices provide no insight into the most important aspect of monetary theory: the changes in microeconomic elements relative to one another among sectors and subcategories of the economy.

The varied effects of changes in the money supply across different sectors of the economy are closely linked to the business cycle. Unfortunately, monetary theory, except from the Austrian perspective, often overlooks this connection. Monetary influences go unnoticed when analysis focuses solely on average price levels, overall spending, or total capital formation. As a result, monetary distortions can occur even under price stabilization policies, with consequences as serious as during periods of (price) inflation or deflation.

Purchasing power premium

In this section, we see how interest rates can be altered by inflationary expectations. We then extend the discussion to a conventional view of influences from the demand for money and to Austrian business cycle analysis. The use of averages and aggregates is only preparatory to the necessary employment of disaggregates for this analysis.

Economists use price indexes, such as the CPI or the GDP deflator, to convert market rates into real rates. Although the analysis has conceptual significance, in practice, such indices can never be formulated adequately to ensure consistent policy reliability. From a scientific standpoint, prices of heterogeneous goods cannot be unambiguously added together, much less averaged.

Austrians are aware that expectations can never be quantified by probability analysis, that they are sometimes ephemeral, sometimes interactive or self-adaptive, sometimes anticipated, but never definitive.

Setting aside these severe limitations, we can gain insight into how economists evaluate interest rates by abstracting from the spectrum of rates across various loan time horizons. When economists refer to the interest rate, they are typically speaking of the most visible interest rate, the money or nominal rate observed in the bond and loan markets. The real rate is a calculated rate adjusted for the rate of price inflation or deflation. The *ex-ante* real rate is the market rate adjusted for expected price inflation. Retrospectively determined, the *ex-post* real rate is the recorded rate adjusted for the period in question by the rate of (price) inflation or deflation that transpired in that period. Looking back (*ex-post*), it might mean that unanticipated price inflation, for instance, reduced the interest payments in real terms to below what had been intended; the real rate was lower than expected.

For example, if last year the observed (nominal) rate was 2% and we discovered that price inflation last year was also 2%, then the (hidden) real rate would have been zero, not, say, 1%, had we prematurely thought inflation would be only 1% last year.⁵

⁵ The real rate is not to be confused with the *pure rate*, which is the real rate free of any risk premium as would be expected under equilibrium states with uncertainty absent. Rothbard noted that the pure rate may be considered the basic rate. Also,

The standard theory posits that if inflation (or deflation) of prices is anticipated or expected for some time, then nominal rates become higher (lower) to compensate lenders for the expected loss (gain) in purchasing power of money over time, as the (hidden) real rate is adjusted to what was intended. In this case, the difference observed between the money (or nominal) rate and the (hidden) real rate has been termed the *price-expectations effect*, or *Fisher effect*, after economist Irving Fisher. During a period of price inflation, the Fisher effect refers to the observed price-inflation premium reflected in the market (nominal or money) interest rate. For example, if the prospective nominal rate for this coming year is 3% and the expected inflation rate is 2%, then the expected (hidden) real rate is 1%, and the Fisher effect would be 2%.⁶

For some economists, a near-zero (nominal) rate targeted by the Fed for the Federal Funds (interbank loans), such as in 2009, was seen as implying a deflationary price decrement or negative price-premium, leaving the estimated real rate positive. Market adjustments for downward price changes may result in a real rate as described above (the Fisher effect), producing a higher real rate alongside a depressed nominal rate. Conventional economics thus adds a premium to the interest rate that appears appropriate. However, as we will see, this adjustment requires amendment when taken at face value, exclusive of considerations arising from an understanding of the origins of the market interest rate, i.e., if taken by simply examining the loan market without considering the time market. Other market rates reflect positive risk premiums, separate from the Fisher effect. Thus, 10-year junk bonds may be at 8%, with safer 10-year Treasury bonds at 4%. Limitations to the use of these calculations arise because no single objective rate of inflation can be established from incomparable price data for the totality of goods and services. For instance, during periods of economic boom, some asset prices, such as real estate or equities, may be underrepresented or omitted from price indices, as was the case in the 1920s, the 1990s, or the early 2000s. Moreover, the currently used indices understate housing costs, omit fuel and food costs, and employ dubious hedonic adjustments that compromise and degrade their usefulness. Monetary policy thus labors under this information handicap.

Dynamic effects possible

What is more, market participants adjust price changes more directly than through a price premium on interest rates. The Fisher effect is not the only mechanism available to the market to compensate for inflationary expectations; present prices might be adjusted instead, thereby pre-empting projected price increases and lowering expected future price increases (a rational-expectations effect).

Again, Austrians especially decry any mechanical application of the Fisher effect, even when price indices can be reasonably established.

Why observed rates may stay low even with inflation

Regardless of the ultimate cause of dislocations that may explain interest rate behavior in the economy, the difficulties of understanding alone would caution against any confidence that monetary policy might be stabilizing. Standard approaches see profit rates enhanced by lower borrowing costs when interest rates are low. However, it is seldom recognized that higher profit rates may be related to the factors that raise them. Additionally, when observing Treasury securities, a lower rate may indicate a 'flight to safety,'

there are often differences between short-term and long-term rates. Economists refer to the term structure of interest rates, which depends on the length (term) of a loan or the maturity of a bond. This structure (represented by a yield curve) is normally positive, with short rates lower than long rates, but can be inverted, with long rates lower than short rates (usually occurring at the onset of a recession).

⁶ A popular measure of short-term inflationary expectations results from taking the difference or spread between the 2-year TIPS (Treasury Inflation Protected Securities) and the 2-year Treasury note, which, for instance, in early 2010, indicated about 1.5% inflation.

whereby lending or investing shifts away from private-market securities and into Treasuries, and vice versa at higher rates.

When considering the market forces that interact to determine the interest rate, viewing the loan market solely as a financial transaction overlooks the trading activities that have the greatest impact on interest rates. The time transactions between input providers and productive firms and agents, as well as between the pricing of goods and assets or capital that provide for future returns, contribute to the aggregate social time agio or premium. We see the outcome of all-time markets in the loan market interest rate.

An implication of the rational expectations effect is that nominal interest rates over a period of anticipated price inflation may never attain a fully compensating inflation premium. Rates may remain modest during a recovery.

It is possible that the stubbornly low-to-zero interest rates in 2015, for instance, were not simply a result of ZIRP (Zero Interest Rate Policy) but also reflected entrepreneurs anticipating that profit rates would likely rise as the recovery progressed. Experience during periods of inflation shows that profit rates rise. Hence, input prices may rise immediately in anticipation. So even though inflationary expectations for this group need not be a direct cause of a higher price premium in the loan market (absent loan market participants with high inflationary expectations), the increase in inflationary expectations outside of the loan market in the production market would operate not to raise nominal interest rates but to reduce them as prices of inputs remain higher thereby inhibiting a price-spread widening. Because price spreads are the basis of rates, rates would not have risen either.

Hence, during a recovery, expected higher returns may lead to prospective investment commitments that increase demand for future (input) goods, thereby keeping input prices up and depressing interest rates. This would act as an infusion of spending into the production structure, lowering rates (price spreads) in the same direction as increased quantitative easing, due to reduced demand for more liquid asset holdings. In other words, commitments encouraged by the knowledge of a pattern of higher-than-normal profit rates during expansions may thus shift the supply of investible funds curve outward. This effect causes lower rates. This differs from low-profit expectations in that it reduces rates just as when the demand curve shifts down (explained further below).

Rates may remain subpar for various reasons. As a result, if authorities do not see a significant inflation premium, they may become less cautious about inflation and may overprescribe easing.

Conversely, perhaps later in the recovery, an inflation premium may be real. Authorities could overreact to high rates due to an unnoticed inflation premium. After a long period of easing to reduce rates towards a target set too low, a monetary authority might then become overly expansionary in order to combat high interest rates.

We note that, as an example of the difficulties with the Fisher effect as a mechanism compensating for inflation, a rational expectations effect (Rothbard, 1962) incidentally becomes the dominant one under hyperinflation.

Accordingly, when markets are moved even further away from their tenuous internal course towards coordination, driven mostly by monetary, bank-credit-related impacts, readjustment processes may be overwhelmingly complicated. In short, interest rate targeting is plagued by too many unknowns, as well as a misapprehension of the impact of open market operations, which overrates the effects on the interest rate through the dependent loan market rather than the time market.

Austrian credit expansion effect

Interest rate analysis faces further problems where prevalent explanations may be inadequate—there note below, most notably by Keynes himself) that if the end of a period of lowered interest rates caused the apparent cessation of expansion and boom, then logic would argue for reinstating easing to correct the recession. However, the reason that a low interest rate cannot return us to the boom of the expansion is that the expansion was a period of ongoing, ever-worsening alignment of complementary productive processes. Even elevated employment and higher GDP measured during that misalignment would not be sustainable.

So, Austrians see beneath the cover of total measured economic activity. Their more sophisticated model comports with common sense. We can consume capital on the one hand and invest in the wrong capital projects on the other. Each supports measured GDP, but each of these subtracts from the ability to deliver supplies of usable goods and services in the future.

The correction must not only revalue these misappropriations, but also liquidate some of them at a loss and terminate entire enterprises that are most might be yet another reason that the real rate is low, thereby resulting in skewed investment commitments. This conforms to the ABCT. This artificial lowering of the interest rate was earlier known to be a Wicksell effect (after economist Knut Wicksell)⁷ operating as a side effect of money supply injection.

Rates may be held too low with monetary easing because analyses using price indices fail to account for productivity increases, in which normality might be gradual price deflation (termed *growth deflation*). Given that dollar GDP cannot grow without monetary accommodation, analysts are misled. GDP numbers can fail to measure advances in economic activity unless accompanied by monetary growth.

In other words, regardless of the interest rate, price deflation may cause authorities, by calculating GDP measures that falsely indicate economic recession, to ease monetary policy and lower rates below what would balance the markets. The near-zero short-term interbank rate may have been artificially pushed below the natural rate, as it now appears to have been in the early 2000s and 1990s.

As widely explained by Austrian economists, during periods such as in the 1920s, actual significant effects of quantitative easing were unrecognized by economists due to the lack of general price inflation. The 1920s began with an overhang of war bank credit expansion that was never purged and, moreover, was continued through the period.⁸ It has been thought (as we will out of line with balanced production. Some of the workforce must be relocated and retrained.

A community could initiate a project to construct a tunnel, thereby avoiding a challenging journey over a mountain. It could employ engineers, train workers in demolition and excavation, and invest in heavy equipment. However, if, halfway through the mountain, the community runs out of means to support its workers, then, when they return to their original activities, the community will have nothing to show for its work, worse off having depleted its funds and resources. Yet, while engaged in the project, it was experiencing a boom in employment and economic activity. Its economists maintained they were on the right track because they enjoyed a high level of aggregate demand; however, they were misled about their current resources. Their recession is clearly not from a lack of effective demand.⁹ It was from the

⁷ Murray Rothbard referred to Wicksell as the “Swedish ‘Austrian’.” (1993 396) and Professor Mason Gaffney referred to Wicksell as “arguably the smartest economist of all times” (2012: 2)

⁸ See Rothbard’s investigation into the 1920’s (1963, 153-164) Wicksell, unlike the Austrians, saw these effects principally when accompanied with price-inflation.

⁹ If “effective demand” were defined in accordance with Say’s Law then we would not be justified in using the term synonymously with spending that merely or only temporarily raises the GDP.

misdirection of resources. Similarly, recessions should not be automatically attributed to inadequate demand.

Some of the disruptive effects of a boom arise from a land-price bubble. Hence, the advantage of building vertically is that it uses a smaller land footprint (i.e., an increase in the marginal rate of substitution of capital for land). In light of this effect, which aligns with the general ABCT, high-rise buildings can be overbuilt after commitments were made during the boom. In fact, a boom in high-rise construction has been used as an indicator in forecasting recessions. Construction of the Empire State Building began just as the Great Depression began in 1929.

Growth deflation

Austrians view periods of gradual price reductions due to productivity increases, such as those that occurred in much of the 19th Century, as healthy and normal, especially under a market-regulated monetary system, which, being free from political manipulation, more easily avoids the excesses endemic to fiat monetary regimes.

Targets, and investor caution

Target rates are not the only indicator of Fed policy efforts. Even when the Fed is unable to lower interest rates because rates are already near zero, it can pursue quantitative easing by increasing the money supply.

Mises, Keynes, and liquidity

Perhaps the most celebrated landmark in economics after Adam Smith was the publication of John Maynard Keynes' *The General Theory of Employment, Interest, and Money* (1936).

Foundational to Austrian economics, Carl Menger's subjective marginal analysis revolutionized classical economics, where prices were henceforth seen as determined on the margin, not by classes of importance, costs of production, or labor content. Building on that tradition were Ludwig von Mises' *The Theory of Money and Credit* (1912) and *Human Action* (1949).

Austrians emphasized a demand-based process of valuation that underlies the constellation of prices. Both supply and demand are demand-oriented. Producers ultimately base decisions on consumer preferences. Distinct from this is the concept of a demand-driven economy, which attributes a healthy economy to a high ratio of consumption to saving. For Austrians, values are determined by consumers. Demand is imputed to factor inputs. Austrians reject the idea that spending on current consumption, rather than saving, is the driving force of the economy.

Taking a wider view, all economic activity, including saving, ultimately aims for consumption, whether present or future. However, consumptionists wrongly attribute investment demand to present consumption demand, rather than prospective demand.

The conventional understanding is that demand for final products, including immediately consumable or disposable goods, determines economic performance. In contrast, the production of future utility should be seen as dependent on factors of production and capital goods.

The demand for money, or liquidity, has long been a focus of monetary theory, particularly among quantity theorists. During the 1930s, unlike the recent experience, rates were elevated. Keynes saw the flight to

liquidity during a credit contraction as contributing to higher interest rates, since savings withheld were not being offered in the market as investible funds. ¹⁰

Rates in 2008

The full explanation for the observed rates may depend in part on whether, in a downturn and financial contraction such as that beginning in 2007, there is increased demand for more liquid short-term investment instruments (but not necessarily for money itself), thereby lowering short-term interest rates. Does this work toward depressing short-term rates as funds flow out of financial investment instruments into, for instance, treasury bills? As we will see, determining this is no simple, predictable matter and constitutes another source of frustration for monetary authorities in reading the economy. During a correction, it would be natural to expect the yield curve to steepen due to a risk premium for longer-term commitments. The 2008 spike in the saving rate was a defensive action to hold more liquid financial assets.

In the eyes of the financial and economic community, the 2008 financial contraction produced a shock to markets that effectively dried up demand for credit, except for Federal deficit borrowing.

One might conjecture that market interest rates were suppressed partly due to reduced borrowing stemming from falling profit expectations, as well as by the Fed's quantitative easing efforts. We have discussed other influences on short rates, but most analysis mistakenly assumes that policy alone is dominant.

A conjecture of increased risk assessments would lead to a decrease in the market interest rate, caused by a shift in asset preferences away from equities toward more risk-averse, short-term, government-insured deposits and government securities. It would also cause a general pullback toward increased savings and liquidity from current income. We know that by 2010, the (income) saving rate had risen from its low of around 2% earlier in the decade to over 3%, while funds had not yet shifted significantly back into equities, with savers still preferring short-term deposits and government securities until later years.

Keynes confined his analysis to the tradeoff between bonds and money balances. Hence, if we had an increase in demand for money balances to meet the desire for liquidity, Keynes's relation would indicate some short-term upward pressure on interest rates. Increased demand for money led to lower spending on bonds, which in turn raised interest rates.

Importantly, Austrian theory allows for rates to change based on saving-consumption ratios independent of concurrent changes in money demand.

The determinants of the saving rate as a percentage of income differ from those governing accumulated savings. During the recession that began in 2007, there was a shift away from tangible assets, such as titles and real estate, to liquid assets or cash, resulting in a decrease in the perceived value of capital and savings.

Over-optimism drove some asset prices too high during the boom. In reaction, those values can be pushed too low, but the market tends to readjust best when not burdened by policy uncertainty.

In consideration of the low interest rates and rescue policies for large hedge and pension funds, there may be a parallel between the mistaken inverse relationship between inflation and unemployment, and what could be called a 'liquidity curve.' Here, instead of a supposed trade-off between inflation and unemployment (the Phillips curve), there may be an overly simplistic and mistaken belief that there is a trade-off between general, widespread price inflation and monetary easing. Indeed, recent booms generated price bubbles rather than general price inflation.

¹⁰ Revealingly, Fritz Machlup noted in Laurence S. Moss (1976, 9-12) that Keynes had given a cursory and critical review of Mises' 1912 untranslated German edition of *The Theory of Money and Credit*, but only years later did he (Keynes) reveal that he was an unaccomplished reader of German.

Inflation and Booms

Thus, contrary to the prevailing economic thinking, we did not have excessive savings leading up to a crisis. Credit expansion constitutes false savings. When prices catch up, there is no net gain in savings. We are reminded by Mises of the distortion in asset prices during the boom. Asset (and producer-input) prices were inflated and needed to be de-inflated to allow markets to clear (Mises, 1966, chap. XX).

For Austrians, even a sharp downturn in valuations is an attempt by markets to return to normal after the boom. The actual “shock” to the market emanates from credit expansion and its ramifications. It has become increasingly evident from the magnitude of the 2007-2008 credit contraction that this correction followed decades of excessive debt accumulation, credit leveraging, and declining saving rates as a percentage of GDP.

Boom conditions resulted from rising asset valuations as markets gradually reflected increased confidence an extended period of price increases.

We are reminded that no economy-wide upward movement in prices can occur without an increase in the money supply, an increase in credit leverage, or a sustained reduction in liquidity preferences (i.e., a reduced desire to hold money balances). Such occurrences have historically been under conditions of outside money or credit inflation (French, 2009), usually exacerbated by a wealth effect resulting from the artificial stimulus of stock prices, financial instruments, or real estate.

During the post-war period, monetary authorities maintained a low target rate of price inflation, ranging from 2 to 3%. Cumulatively, such rates are not inconsequential, even at 3%; prices double every 23 years. Asset bubbles emerge when prices have risen to the point that speculators enter the market, even if they are aware that fundamentals may not support ongoing price appreciation. Administered rates of inflation (even if seemingly low), when prices would naturally be gradually falling, provide the ‘leavening’ for the production of asset bubbles.

The 2007 crisis was the culmination of a unique combination of financial and credit distortions and endemic moral hazard. Just as important as monetary policy interference was an unprecedented neutralization of normal market caution. The result was risk and debt overextension, as well as the unrestrained use of real estate as a collateral base for lending by the banking system, primarily instigated in Washington, exemplified by Freddie Mac and Fannie Mae.

Lack of information for managing the Economy

However, the authorities were unaware of the developing imbalances until the advent of the financial crisis in 2007. Aside from the aforementioned limitations in the measurement of price inflation, no definable grounds existed for appraising the extent of the Fisher effect. Inflation indices were unreliable for obtaining a clear understanding of the economy; the inexact measurements of current price inflation rates only become available after the data is evaluated. Steady price inflation in one year does not extrapolate to future years. Price inflation is a dynamic and unstable phenomenon characterized by disequilibrium.

George Reisman, with a Ricardian slant to his Austrian analysis, finds no place for the Fisher effect because interest rates reflect profit rates; profit rates already include expectations of price-level changes. The Austrian insight was made explicit by Rothbard — that interest rates in the loan market must reflect rates of return in the economy, especially given the enormous quantities supplied and demanded on the time market. If, in time, prices come to reflect inflationary expectations, the interest rate would be devoid of a Fisher effect, and this would control the loan market rate with no extra premium tacked on.

The task of managing the economy was underestimated. Calculating interest rates, as we have seen, is a complex and challenging task. Retrospective calculation of real rates is more straightforward; however, current price changes in some sectors may not be matched in others due to complex transmission mechanisms.

Once the recession is underway, unlike mechanisms during inflation, corrective price deflation in consumer goods that reduces profit rates might be expected to elicit only a lagged fall in producer input prices, keeping in mind that, as Reisman emphasized, product pricing is usually a markup over the cost of production. The result may be a delayed reduction in relative prices for inputs of original factors and capital goods, due to greater price rigidity at this stage than at the final retail interface. Such lag would result in price spreads narrowing and loan market rates falling or failing to increase accordingly. However, it would not prevent reduced quantity demanded for factors and a decline in employment, as prices may be slow to adjust downward to a new equilibrium.

In fact, this kind of adjustment discontinuity may initially work against any rise in interest rates for some time by keeping price spreads relatively narrow. "Historically, it has often been the case that product prices rise more rapidly and fall more rapidly than prices of original factors." (Rothbard 1962: 698), so final goods prices may fall before factor input prices.¹¹

¹¹Note that this is not the same as saying that capital goods prices fluctuate in amplitude less than final goods over the business cycle, which, given time, is not the case.

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ADDENDUM

On Interest Rates:

- Effects from money supply changes
- Effects from credit conditions
- Effects of price inflation
- Effects from profit rates
- How price spreads affect profit rates
- Do inflationary expectations only affect short-term rates because current price changes can wash out future inflation?
- Fed policy. Taylor Rule. Dual mandate.
- Fed has little effect on rates and so is always catching up; policy lags 3month Treasuries.
- The problem with the Fed is enabling Treasury borrowing by purchasing debt.
- Because of productivity deflation, the market inflation rate should be even lower than the target inflation rate of 2%.
- Austrian time market rules interest rate, not the loan market.

Business Cycle concerns:

- GDP a poor measure
- Unemployment Rate better
- Capacity Utilization is also better
- Ricardo Effect: boom in fixed capital industries reverses due to increased profit rate. Fixed capital is stimulated by lower real wages when CPI rises.
- Increased profit rates steer business investment to enterprises with the most rapidly circulating capital and away from capital-intensive enterprises.
- This is a change in capital intensity or capital valence.

Volker Fed policy

- High interest rates occurred in the late 70's early 80's because of Fisher effect inflationary expectations that were unanticipated in commodity markets.
- Mises was right that unexpected inflation (increased consumer goods prices) distorts (raises) perceived profit rates.
- This underlies the rise in interest rates produced by profit rates generally, while also not generally experiencing a Fisher effect in the loan market.

Fed policy

- Fed open market operations only affect interest rate movements in the very short run due to market expectations that it has a governing effect. In actuality, it has little effect because of the much larger time market determined by price spreads throughout world markets that rule the level of interest rates.
- This is why data reveals that Fed policy is reactive to interest rate changes overall, a lagging, not leading, series. It explains recent movements in interest rates, which have returned to levels below what most analysts expected due to the so-called expansive policy.
- Since profit spreads govern interest rates, moderately high interest rates indicate a healthier economy, while low interest rates indicate a depressed economy.

- The common view is that inflation spurs interest rates, but published inflation rates are predominantly lower than actual due to government data manipulation.
- The current high interest rate in Russia (16%) should not be seen as a reaction to high inflation (although the published inflation rate is at 8%, it is likely higher).
- This high interest rate indicates both a risk premium due to its geopolitical problems with the Ukrainian conflict, as well as high investment opportunities, bringing up the demand for loanable funds.
- This means that over the last few decades, low interest rates in the West could be attributed to depressed economies where profit spreads were compromised by various barriers to progress.
- Share prices may outrun the actual profitability of the economy in a country due to speculation or currency depreciation (inflation).
- Hence, the fear that an increasing deficit will drive up interest rates unsustainably is unfounded. In fact, even a \$2 trillion deficit is a small piece of the overall time-market volume of transactions, given that more than just GDP must be counted, because of all the intermediate transactions in the structure of production. Other measures of economic activity include gross output (GO) and gross domestic transactions (GDT).
- Of course, along with a comment that Rothbard once wrote to the effect that the problem with fiat money is not that it must lead to imminent economic collapse, but that it can sustain the dysfunctionality of the system undeterred for too long, the problem with deficits is that they can do their dirty work for far too long.
- And by dirty work, we must take issue with the Modern Monetary Theorists (sic) who opine that since savings must be absorbed by instruments somewhere, government debt is just a convenient way for the public to hold its savings.
- In fact, the government has three ways to use the funds.
- Firstly, it is spending on reasonably efficient expenditures such as infrastructure, transfer payments back to taxpayers, legitimate welfare, etc.
- Secondly, ridiculously wasteful programs and agencies that we all know account for much of the budget.
- Thirdly, destructive expenditures include not only interventions that destroy foreign nations and wealth but also subsidize inefficient enterprises and fund the administrative state that, in effect, legislates regulations and promulgates harm to productive sectors and liberties.
- It is usually accompanied by infusions of funding to the corporate industrial complexes.
- Besides the burden on future taxpayers, the borrowed funds represent a drain on loanable funds availability for the non-government sector (crowding out).
- This brings us to the motivation for surreptitious engineering of international military conflict or other emergency treasury expenditures.
- It stems from gains to be made from the extension of credit to finance expenditures.
- During war emergencies or other fabricated emergencies, such as a global pandemic, central banks facilitate treasury debt, which generates a stream of interest income for the banking sector.
- Hence, another reason for eliminating central banks such as the Fed.

