Handout #9: Liquidity and Confidence

1. The Two Important Qualities of Effective Money: Liquidity and Confidence

Liquidity

Money is the *medium of exchange* that finances almost every purchase of a good or asset, and is requisite for the operation of anything more than a primitive, barter economy. It circulates around an economy as people receive it (in exchange for some good, service, or asset) and then re-spend it. A meaningful measure of the quantity of the medium of exchange in an economy is level of real balances (i.e., the nominal money supply divided by the price level). The term *liquidity* is used to identify the working quantity of real balances in an economy. This might be somewhat confusing since the word has another popular definition (i.e., the quality of being readily convertible into cash). But it is the former version of “liquidity” that is highlighted in this handout. For example, references below to an “increase in liquidity” identify an increase in the level of real balances circulating around the economy.

Whereas an economy’s real balances constitute the amount of the medium of exchange that actually exists, they do not necessarily equal the amount that is required in order for the economy to function at its peak, sustainable level of output. The given size and structure of the economy, as well as the tastes of the economic agents to hold money, determine a minimum amount of real balances that are necessary to accommodate the economic activity when all resources are efficiently employed at their maximum sustainable full-employment level of output. Any level of liquidity less than the minimum level will hinder economic activity in general due to the scarcity of the medium of exchange to carry out transactions. But it is interesting to note that the slower economy will put resources out of work that would be productive if the economy were at full-employment, and the unemployed resources will pull input prices down which, in turn, will lower output prices. The lower price level will increase the level of real balances. Therefore, too little liquidity in the economy will bring about equilibrating forces that increases it.

An excessive amount of liquidity in the system, i.e., more real balances than are needed to permit the economy to function at its full-employment level, will cause increased activity as the excess liquidity circulates around the economy like a hot potato. Not only can this stimulate output to rise above its long run equilibrium level, but it will also drive up prices. Thus, a surplus of liquidity and the resulting higher prices will bring the level of real balances down until the surplus disappears. To the extent that the prices bid up by the extra liquidity are the prices of assets such as bonds, an important effect of the greater liquidity is lower interest rates. Of course, reducing interest rates stimulates consumption as well as investment and will usually boost short run output.

Although the optimal level of liquidity will eventually be attained due to the equilibrating forces that drop prices when liquidity is too scarce, and raise them when there is excess liquidity, the speed of the price adjustments is – as was discussed in Handout #8 - a subject of serious and important debate in economics. On one side of the debate are economists who believe that prices are *sticky* and move so slowly that government actions changing the nominal money supply can accelerate the adjustment of real balances and the economy back to full-employment. These economists advocate *activist* (or *discretionary*) monetary policy, i.e., they recommend changing the money supply to address, if not prevent, recessions and economic booms. On the other side of the debate are economists who think that prices are *flexible* and will adjust before talented
agents of the government can perceive actual liquidity problems and appropriately adjust the
nominal money supply. These economists do not advocate activist monetary policy but, instead,
prefer to adhere to some predictable, long term trend or rule in determining how much money to
issue. An example of a monetary rule is to predictably increase the money supply by 3% every
year regardless of economic conditions. Some of these economists even maintain that prices are
perfectly flexible and adjust instantaneously and, therefore, monetary policy has no effect on real
balances or the real economy, i.e., they maintain that money is neutral. For example, classical
and real-business-cycle theories assume price flexibility that assures money neutrality.
Accordingly, real-business-cycle theorists maintain that any variations in output that appear like a
business cycle are actually completely independent of monetary considerations, and are caused
instead by changes or shocks to the productivity of the underlying economy (i.e., changes in
resources or technology) or, put differently, they are due to shocks to the level of full-
employment output.

Even in the extreme case in which perfectly flexible prices cause money to be neutral,
increases in the rate of growth of the nominal money supply will increase the rate of inflation,
and higher levels of inflation can affect people’s behavior. But such effects are small compared
to the possible effects of monetary policy when prices are not perfectly flexible and, therefore,
changes in the money supply alter the level of real balances for a significant short-run period
until prices finally adjust. The remaining discussion assumes that prices are sticky to some
extent.

Confidence

Given the importance of having a sufficient level of real balances to achieve full-
employment output, it is evident that a major goal of monetary policy is to maintain that
minimum level of liquidity. A second, yet related concern of the monetary authority that
determines a country’s monetary policy is that people have confidence in the currency’s future
worth. As part of being an effective medium of exchange, money needs to be a dependable store
of value. After all, who would accept money in an exchange if they believed it will lose value
before they have the opportunity to spend it. As uncertainty about the money’s future worth
increases, the less desirable it is to accept, which only handicaps its effectiveness as a medium of
exchange. Perhaps more importantly, the price of bonds denominated in the questionable
currency fall as promised future receipts in terms of it are less valuable, i.e., reductions in
confidence raise interest rates.

A principle source of reduced confidence in money is expected inflation. Inflation is
simply a reduction in the purchasing power of money, therefore, expected inflation makes
receiving and holding money less appealing. Past experience has demonstrated that one of the
more dependable indicators of coming inflation is current inflation. Monetary authorities have
learned the effect that current inflation tends to have on expected inflation, and are mindful that
excess liquidity can increase inflation that will spark fears of future inflation and hurt confidence
in money. Once again, such doubts about the value of money in the future makes bonds (which
promise to pay money in the future) less desirable compared to other assets (e.g., equities, real
estate, gold, antiques!….), and the lower bond prices correspond to higher interest rates.¹

¹ Additional problems associated with inflation are shoeleather costs: the resources used
to carry out cash management practices that limit the time that wealth is held in money – and
In the discussion on liquidity above it was noted that increased liquidity raises bond prices and lowers interest rates. This is true if, as was implicitly assumed in that discussion, the level of confidence in the money is not affected by the change. Here it is acknowledged that increased liquidity can lead to expected inflation that will diminish people’s confidence in money and raise interest rates. The net influence of an increase in the money supply on interest rates depends on the relative strengths of these two effects. Thus, the art of monetary policy – of which more will be said below – often concerns adding liquidity, but not so much as to spark fears of inflation that undermine peoples’ confidence in the currency.

It is interesting that the tradeoff between liquidity and confidence has been presented thus far without alluding to the existence of any other country’s economy or currency. But the problems accompanying reduced confidence in a country’s money are much worse for an open economy where foreign assets denominated in other currencies are alternatives to domestic assets. Because the exchange rate is critical in determining the relative value of domestic versus foreign assets, it is also very important to the level of confidence. Or, put more accurately, the expected appreciation or depreciation of a currency affects desire to accept and hold it. For example, the belief that a currency is likely to depreciate clearly makes it less desirable to hold relative to other currencies. Unfortunately, this kind of expectation is self-fulfilling when the exchange rate is flexible: People’s sale of the currency in the foreign exchange markets due to their concern that it will depreciate will bring about the depreciation.

Not only are expected changes in the exchange rate self-fulfilling, but any news that carries information about future exchange rates has an immediate impact on the current exchange rate. Consider the case where the monetary authority announces a new policy in which it expects to have higher inflation over the coming year. As was shown in Handout #3**, higher inflation will dependably cause the currency to depreciate. (I.E., inflation will make the country’s goods relatively more expensive, thus making its exports more expensive and imports relatively cheaper. The associated decrease in demand for the currency and increase in its supply will cause its exchange rate to drop.) But if people reasonably expect the currency to depreciate as the inflation is realized over the coming year, there is an incentive for capital to move from assets denominated in the domestic currency to foreign assets before the value of the domestic currency can fall. There is essentially a rush to sell the currency before it depreciates but, of course, this capital flow increases the supply of the currency in the foreign exchange markets and assures that the exchange rate falls right away. The greater the mobility of capital, the more rapidly this shift in assets can occur, and the faster and farther the exchange rate will fall.

It should be noticed that a loss of confidence causing people to sell assets in a domestic currency and reinvest the funds in a foreign currency will bring about a fall in the asset prices in the domestic currency which, in the case of bonds, means higher interest rates. It should also be noted that one reason that an expected depreciation would occur is higher expected domestic inflation as just described, but there are other possible causes as well.

Thus, because a flexible exchange rate changes with every bit of reliable news about its future fundamental value as well as with many rumors, the exchange rate can be volatile and unpredictable. The uncertainty about what the exchange rate will be at any given time is referred to as...
to as **exchange rate risk** (ERR). Given peoples’ natural uneasiness about uncertainty, the presence of ERR can have a deleterious effect on peoples’ confidence in the currency in much the same way as with an expected depreciation, but just to a lesser degree. Greater volatility in a currency in the form of greater possible appreciations as well as deprecations makes the currency generally less desirable to hold as an asset, just as it makes assets denominated in that currency less desirable. Once again, an important consequence of reduced confidence in a currency is less demand for bonds and other assets in that currency, which causes bond (and other asset) prices to fall and, therefore, interest rates to rise.

Although higher interest rates that reduce investment and consumption may be the most tangible harm caused by ERR and the corresponding reduction in confidence, the insidious effects of ERR are more extensive. It, like almost all forms of risk, generally dissuades economic agents from going ahead with economic activity. Uncertainty promotes agents pausing and waiting for more information before acting, which causes economic activity to slow and output to fall. Additionally, lack of confidence in the future value of the exchange rate can also discourage the formation of export and import relationships between countries.

The negative effect that ERR has on economic activity and output makes reducing, if not eliminating, ERR a priority for any monetary authority. The classic policy to assure confidence in a currency is for the government to fix the value of its currency in terms of another money that is highly regarded, i.e., to have a fixed exchange rate policy.

### 2. The Tradeoff Between Liquidity and Confidence: Fixed Versus Flexible Exchange Rates

A **fixed exchange rate** is a policy in which the government agrees to honor a particular exchange rate, thus purchasing any excess supply or supplying any excess demand prevailing at that exchange rate from the private participants in the foreign exchange market. The policy is obviously appropriate for eliminating changes in the exchange rate and the associated ERR, and is designed to preserve confidence in a currency. But the only way for a monetary authority to fix the value of a currency in terms of a particular foreign currency is to increase or decrease the money supply as necessary to maintain the quoted rate. For example, if there are pressures for the exchange rate to rise, then the monetary authority must increase the money supply (by selling the domestic currency in the foreign exchange markets), just as pressures for the currency to depreciate are met by the monetary authority contracting the money supply (by purchasing the domestic currency in exchange for its foreign reserves).

Because a fixed exchange rate policy dictates that the money supply be whatever is needed to honor the fixed rate, the possibility of an activist monetary policy attempting to affect the economy by altering the level of liquidity in the economy does not exist when the exchange rate is fixed. The inability of a change in the money supply to be sustained under a fixed rate was clearly demonstrated using IS/LM/BP analysis in Handout #7, which showed how monetary policy is ineffective under a fixed exchange rate regime. Thus, although a fixed exchange rate policy is effective at instilling confidence, its complete focus on confidence leaves the level of liquidity in the economy unattended. Although it is possible at any given moment that the level of liquidity will be sufficient for full-employment output, it is also possible that too little or too much liquidity exists.

In the case where there is too little liquidity for the economy to be at its full-employment level, there are equilibrium forces acting to increase liquidity and return the economy to its full-employment level in the long run. Specifically, the surplus of available resources at the existing
price level will lead to a fall in prices and the price level, causing an increase in liquidity that promotes greater output. Therefore, a laissez-faire policy in this situation leads to the same conclusion as was presented in Handout #8: Prices adjust in the long run to restore output to its long run, full-employment level.

The opposite policy of a fixed exchange rate is a perfectly flexible exchange rate in which the government does not intervene in the foreign exchange markets (i.e., there is no activity in the KFA\textsubscript{GOV} account). In contrast to a fixed exchange rate that changes the money supply when there are BOP surpluses or deficits, the money supply under a flexible exchange rate is left unchanged in response to external pressures. Consequently, a monetary policy that increases or decreases liquidity is not thwarted by compensating changes in the money supply from government interventions in the foreign exchange markets. Thus, a flexible exchange rate permits monetary policy to have an effect on the economy (as was demonstrated using IS/LM/BP analysis is Handout #7). But, as was discussed above, a flexible exchange rate is vulnerable to ERR and the resulting reduction in confidence.

Whereas a fixed exchange rate policy addresses confidence at the expense of liquidity, and a flexible exchange rate allows monetary policy to adjust the level of liquidity at the cost of reduced confidence, the question arises: Is there some form of compromise or hybrid policy that is preferable to either of these two extremes? The answer to that question is the subject of Handout #10. But before examining alternative exchange rate policies, it is helpful to investigate the nature of the basic fixed and flexible exchange rates a little further.

3. Fixed Exchange Rates and the Price Adjustment Mechanism

To understand how a fixed exchange rate conditions economic activity, consider first how money services two different regions of the same country. For example, assume that the northern half of a country specializes in agricultural products, while the southern half produces mainly manufactured goods. Also assume that the economy is in an equilibrium in which 50% of the liquidity at any given moment is found in the north, while the remaining 50% of the real balances are circulating, on average, about the south. Obviously, money moves back and forth as the northerner purchase manufactured goods and the southerners buy agricultural products, but an equilibrium exists where the flows back and forth offset each other (i.e., there is balanced trade between the regions).

Now, assume that there is a shift in demand towards manufactured goods and away from agricultural goods. The long run effect of such a change will be an increase in the price of manufactured goods relative to agricultural goods, which will benefit the southerner manufacturers and lower the social welfare of the northern farmers. It is also the case that a greater share of the liquidity will settle, on average, in the south. But the short run path to this long run situation is of interest.

The shift in demand will bring about a net flow of money to the south from the north as more manufactured goods and less agricultural goods are purchased. The increase in the share of liquidity in the hands of the southerners will stimulate spending in that region. The existence of sticky prices inhibits prices from rising in the face of the extra spending, just as sticky prices resist falling in response to the reduced liquidity available in the north. The failure of prices to promptly adjust causes output in each region to overreact to the shock. But over time the prices will adjust as the prices in the south rise and those in the north fall. The higher price of the manufactured goods resulting from the increased demand reduces the amount that people want to
purchase, and effectively dampens the effect of that increase, just as the falling price of the agricultural good that is demanded less mitigates the effect of the decrease. These counterbalancing price effects are known as the **price adjustment mechanism**. When prices have fully adjusted the effects of the original shock are partially reversed. Thus, sticky prices causes shifts in demand to cause changes in output that overshoot their long run levels.

It is interesting to observe that this story is essentially unchanged if we assume that each region has its own currency and one of the countries fixes its currency to the other. The shift in demand from agricultural to manufacturing goods causes the demand for the southern currency to rise by those selling the northern currency. The monetary authority with the policy of fixing the exchange rate essentially sells (issues) the southern currency and purchases (swallows up) the northern currency to maintain the quoted exchange rate. Note that the aggregate amount of money circulating in the two countries remains unchanged as a result of the intervention. The monetary authority merely swaps one currency for another, and does not affect the sum-total of currency circulating in the two economies. However, the share of liquidity in the two regions changes in the same way as with the previous example: The share of liquidity in the southern region rises and the share falls in the north. Once again, the presence of sticky prices will cause the shift in demand to cause output in the south to boom with the extra liquidity and output in the north to suffer from the fall in liquidity, before the price adjustment mechanism overcomes price stickiness and each output bounces back to its new long run level. The expression **classical medicine** is often used to describe the painful drop below full-employment output experienced by a country that experiences a BOP deficit (such as the northern country in this example) needed in order for the fall in price to counter the original negative shock to its trade situation.

The comparability between two currencies connected by a fixed exchange rate and a single common currency is a helpful insight that often proves valuable in understanding how a fixed exchange rate affects economic activity. The theoretical similarity between these two situations will be referred to again in following handouts.

**Flexible Exchange Rates as a Substitute for the Price Adjustment Mechanism**

Consider the same shift in demand between the southern manufacturing region and the northern agricultural region, but this time assume each region has its own currency and the exchange rate between the currencies is flexible. The increased demand for southern manufacturing goods simply causes the southern currency to appreciate and, therefore, the northern currency to depreciate. I.E., there is no need to wait for prices to overcome their stickiness and change the relative price of manufactured goods in terms of agricultural goods, because that adjustment is accomplished with the change in the exchange rate. Essentially, the difference is that flexible exchange rates do not suffer the same kind of price stickiness as the prices of goods and services. Therefore, the long run effect of the shift in demand is achieved much more rapidly without suffering the problems of the overshooting associated with sticky prices. A significant advantage of flexible exchange rates is that they preclude the need to endure classical medicine.

4. The Tradeoff Between Liquidity and Confidence: More Complicated Than It Might Seem

One might initially think from reading the above that the ideal amount of real balances in an economy is just the minimum necessary to meet the liquidity requirement for full
employment, without any excess liquidity that would spur inflation and compromise confidence in the money. Unfortunately, it is not quite that simple. The problem is that the level of confidence depends on expectations of future conditions and not just on the current level of liquidity. Therefore, it is possible that people’s confidence in a currency can become shaky due to uncertainty about the future, even though no excess liquidity currently exists. In this case, they will still want to protect their wealth and sell assets denominated in the seemingly vulnerable currency to buy assets denominated in a more trustworthy currency, which includes selling the questioned currency in the foreign exchange markets. Without government intervention, the increased supply of the suspected currency will cause the exchange rate to drop, which will validate the doubts that precipitated the capital outflow in the first place. This depreciation will only make the concept of exchange rate risk more salient to economic agents, and could give the currency a lingering reputation of not meriting confidence.

If the government chooses to defend the credibility of its currency (and has accumulated sufficient foreign reserves), it will purchase its own currency in the foreign exchange markets to dampen or prevent the fall in the exchange rate. Although credibility might be saved by this policy, the purchasing of domestic currency in the foreign exchange markets contracts the outstanding money supply and, therefore, reduces liquidity. It is possible (and, some would argue, it has occurred many times) that defending the reputation of currency by reducing liquidity will, in turn, contract the economy along it. This analysis demonstrates once again how a country’s exchange rate policy is in many ways inseparable from its monetary policy.

**Monetary Policy and the Tradeoff between Liquidity and Confidence**

The ongoing tradeoff facing those who conduct monetary policy is that increasing the money supply increases liquidity, but the increase can threaten higher inflation that will undermine confidence. The benefit of increased liquidity is a short run boost to output. Even if economy is already operating above its full employment level, added real balances can increase output even further (along with the greater inflation as the economy rebounds farther back to full employment). More practically, activist monetary policy is used to accelerate the return of output to its long run equilibrium faster than price adjustments will accomplish it under a laissez-faire policy. Not only is expansionary monetary policy employed in recessions, but contractionary monetary policy is used to tame booms and prevent the associated increase in prices which, as pointed out above, can reduce confidence in the currency. But even though most economists agree that changes in liquidity will have short run consequences, mainstream economic theory maintains that it does not affect the long run level of output once prices have adjusted.

The benefits of confidence, in contrast, contribute to the economy in both short run and long run ways. The perceived safety of the currency makes bonds denominated in the currency more desirable and increases their prices, i.e., interest rates fall and promote more investment and consumption over the short run. Confidence also benefits the underlying real economy more generally by maintaining a safe, less risky environment for economic actors that makes them more likely to invest, consume, work, and employ their resources. Thus, the economy will produce more than when a backdrop of uncertainty clouds the economic landscape and complicates people’s economic decisions. By influencing the full employment level of output, altering the degree of confidence will also affect short run activity. But the short run benefits of preserving confidence by contracting the money supply are often smaller than the harmful short run effects of the lost liquidity. Still, many economists maintain that the short-term pain is worth
the long-term gain from having a credible currency with a sound reputation. Thus, the tradeoff between liquidity and confidence can be cast as a tradeoff between short run and long run output.

Economists are inclined to favor the growth of long run output and, therefore, tend to advocate monetary policy that preserves confidence in the currency. The cost of more variable short run output that creates larger swings in the business cycle is obviously undesirable, but it is generally preferred by many economists to sacrificing growth. On the other hand, politicians and government leaders are more intent on keeping their constituents – and not economists – happy. There is much evidence to suggest that the recent, short run behavior of the economy has much to do with a politician’s popularity and likelihood of re-election. Therefore, those people who are actually in charge of conducting monetary policy often prefer a monetary policy that focuses on liquidity, even though these same people may publicly pay homage to the importance of confidence and the short run sacrifices that might be necessary to achieve greater long run growth.

Thus, financial markets observe those who conduct monetary policy as if they were watching someone on a diet. The long-term benefits of a diet are known and dieters will claim that the benefits are worth the short run discomfort of not eating everything that is desired and easily available. But maintaining a diet takes a great amount of discipline because it only takes one moment of weakness for the diet to be broken. Similarly, those who are conducting monetary policy when a recession occurs may be torn between maintaining the credibility of the currency, or increasing liquidity to help alleviate the short run misery (and increase the probability of them staying in power). Choosing to preserve credibility requires making the decision to not increase liquidity many times.

The degree of confidence in a currency depends on peoples expectations regarding the possible future behavior of monetary policy officials, but, unfortunately, looking at their past behavior does not provide certainty regarding their future actions. Just as one may doubt the willpower of a successful dieter when a piece of chocolate cake is about to be put before him, there is often uncertainty about the monetary policy makers’ commitment to credibility when a recession is seemingly on its way, if not already present. Argentina was recently plagued by this kind of problem. It actually fixed its currency (the peso) to the dollar in 1990 and honored the same exchange rate for over ten years. But still by the ninth, tenth, and eleventh year confidence in the currency was clearly lacking. Argentina dutifully sacrificed liquidity to honor the fixed exchange rate, but the economic hardship that existed, in part because of the low levels of liquidity, only fueled fears that the government would yield to political pressures and expand the money supply and let the exchange rate drop. Thus, a kind of vicious cycle was in place: Reduced confidence in a currency with a fixed exchange rate lead to reduced liquidity that harmed the economy, which then generated fears that the government would concede and increase the money supply (i.e., a further loss of confidence). In Argentina’s case, more than a decade of demonstrating its commitment to assuring the peso’s value by fixing it to the dollar was insufficient to establish confidence as people still questioned the Argentine government’s future resolve.

2 Throughout these years the interest rates on US dollar loans/deposits in Argentine financial institutions remained significantly lower than interest rates on Argentine peso loans/deposits.

3 This is not to imply that Argentina’s problems did not have other causes including questionable fiscal policies.
5. The Relationship Between Fiscal Policy and Confidence

There are only three different ways for a government to finance its spending. It can:

1) raise the funds by taxing, or;
2) it can borrow the funds by issuing bonds, or;
3) assuming it is the monetary authority over its currency, it has the option of simply printing up the money to pay for its spending.

The relevant government spending in this budgetary context includes not only government purchases (i.e., what has been labeled G in these handouts), but also transfer payments distributed by the government (e.g., social security and unemployment benefits) as well as interest paid on existing government debt. The sum of all these forms of government spending is referred to as government outlays (GO). If we designate all forms of tax revenue (i.e., including T as well as transfer taxes such as the social security tax) as TT, newly issued bonds which add to the outstanding stock of government bonds as ΔB, and the money, or more accurately, the monetary base recently created by the government as ΔMB, then the financing relationship can be simply expressed as

\[ GO = TT + \Delta B + \Delta MB \]  

(9.1)

Equation 9.1 is known as the government budget constraint and serves as a very helpful tool in understanding the relationship between fiscal policy, monetary policy, and the exchange rate.

For most governments, the great majority of GO is financed through TT and ΔB and, therefore, the ability of the government to pay with new monetary base is often overlooked. This was even true of the discussion in the earlier handouts, which implied that government deficits are financed with new bond sales without mentioning money finance. The actual return to the government from printing the money supply is called seigniorage. For example, if a government prints a new $100 bill at a cost of $1, then it has attained $99 in seigniorage. Although governments have been known to pay for government outlays with newly created money, most modern governments receive seigniorage in a less direct, but essentially equivalent way. They conduct open market operations in which the central bank purchases government securities with newly created money. The retirement of the government debt is financed by seigniorage in this case.

The ability of the monetary authority to simultaneously increase liquidity and gain seigniorage without any real downside may sound too good to be true, and it effectively is for levels of seigniorage beyond a fraction of the amount needed to finance government outlays. For example, eliminating both taxes and borrowing and financing all of GO with money would bring about massive inflation. This has been the situation with countries that have experienced hyperinflations. Such extreme cases are rare compared to governments that have collected taxes and borrowed, but still relied too much on money finance such that significant inflation occurred. Essentially, if an economy experiences inflation of 20% or greater, it is almost certainly the case that the government is depending too much on seigniorage to finance its outlays. Inflation at anything above this level is certainly due to the increase in the money supply, and no government would suffer the harm associated with this kind of inflation unless it offered some kind of advantage to the government. For a government that has difficulties collecting funds from taxes and borrowing to finance its desired outlays, the cost of inflation may be worth the extra seigniorage. Of course, higher relative inflation will be bring about a fall in a country’s exchange rate.
The potential for government leaders to use monetary policy for their own political gain is a serious concern. First, it is possible to conduct expansionary monetary policy that increases liquidity before an election for the incumbent to reap the political benefits of a booming economy. The higher prices and the slide back to full-employment output that occur after the election are secondary to a politician intent on re-election. Secondly, the possibility for money creation to finance government outlays might prove too tempting for politically oriented government leaders to manage responsibly. Many governments try to prevent the potential for such abuses by insulating the monetary authority from the power of elected officials, i.e., they designate an independent monetary authority. Of course, it is impossible for an entity to be completely independent of the same government that sanctions its existence. But, for example, the US Congress has been fairly good about letting the Federal Reserve Bank of the United States – which it created – act as an independent body.

It was stated above that the government budget constraint helps illustrate the connection between fiscal policy, monetary policy, and the exchange rate. To demonstrate, consider the effects of expansionary fiscal policy in either the form of increased government purchases or decreased taxes. If there is a monetization of the resulting deficit – i.e., if the deficit is financed by newly printed money – then inflation will almost surely occur. As soon as people realize that inflation is impending, there will be capital outflow and a flexible exchange rate will fall. Essentially, fiscal policy that is financed by an increase in the money supply can lower confidence in the currency will all the consequences associated with reduced confidence.

But even if the current government deficit is financed by current borrowing without any unusual increases in the money supply, the increased debt held by the government can concern the financial markets. Specifically, the higher debt burden can instill doubts that the government, if not today, will someday need to depend on money creation to pay its debts. To the extent that monetizing its debts and the associated inflation is a possibility, the risk of future depreciations represents ERR that diminishes confidence. Thus, the government budget constraint effectively reveals how responsible fiscal policy is prerequisite for stable prices and, therefore, a stable exchange rate.

When most of the members of the European Union decided to form a monetary union in which the different countries share a single currency (i.e., the euro), a central bylaw of their confederation was that no member country would permit an annual government deficit of more than 3% the size of their GDP. This rule – a key component of the Growth and Stability Pact – was agreed to because of the effect that deficits can impose on monetary policies and exchange rates. The founders of the new currency did not want confidence in it compromised by excessive government deficits.

Appendix: Monetary Policy and Asset Price Bubbles

The discussion on liquidity in this handout maintained that real balances in excess of the level needed to promote full employment output would precipitate higher prices, which would keep reducing real balances until pressures for further price increases disappear. Over the past two decades the effects of globalization (in the form of decreasing transactions costs and increasing volume of international trade) has been credited with causing an alternative reaction to excessive liquidity. Specifically, price increases that would otherwise result from excessive real balances can be prevented by foreign import competition. The high volume of real balances whipping around the economy without being diminished by rising prices not only increases
output-promoting expenditures, it also bids up the price of assets. The wealth effect of higher asset prices only augments the stimulative effect of the increased expenditures by encouraging more consumption. Additionally, higher bond prices mean lower interest rates that spur investment.

Before discussing the effect of monetary policy on asset prices further, it is helpful to present a common theoretical perspective on them. Asset prices are often viewed as the sum of two component prices: the “fundamental value” of the asset plus its “speculative component.” The **fundamental value** of an asset is the present value of the expected payout from that asset as determined by discernible qualities of the asset, where those qualities are referred to as the asset’s **fundamentals**. For example, the fundamental value of a stock is often deemed to be the present value of the expected stream of dividends to be provided by the stock. A change in one of the stock’s fundamentals, e.g., a change in a particular expected dividend or a change in the interest rate used to discount future dividends, would change its fundamental value.

The specification of a **speculative component** simply broadens the interpretation of asset prices to make room for the possibility that they differ from their fundamental values. The existence of a speculative component is actually a subject of great debate in financial theory. Some theorists believe that speculative activity can drive the price of an asset away from its fundamental value, while others maintain that any asset’s price must be its fundamental value, even when the price moves in ways that are inexplicable from any perceivable fundamentals, i.e., any apparent deviation of a price from its fundamental value must be due to the fundamental value being “miss-specified.”

One possible type of speculative component is one that varies randomly over any time period and averages out to be zero. However, some analysts have perceived speculative components that remain positive and growing over days, or even months or years. These persistently positive speculative components are referred to as **asset price bubbles**. In most cases “bubbles” seem to disappear quite rapidly, i.e., they are said to “pop”.

Many people believe that careless monetary policy can precipitate asset price bubbles. For example, many blame the Fed for the US stock market “bubble” of the late 1990’s and the US housing price “bubble” of the early 2000’s. They argue that price competition from foreign imports has kept inflation in check and seduced the Fed into providing too much liquidity. Although goods prices remained acceptably stable, the rising liquidity swelled asset prices. Of course, few complain about the idea of increased expenditures and rising asset prices unless they fear a significant rebound in the form of a bubble popping. The sudden shock to wealth and interest rates can be hard on the economy.
Key Terms

- asset price bubbles
- classical medicine
- confidence
- exchange rate risk (ERR)
- fundamental value
- fundamentals
- government budget constraint
- government outlays
- independent monetary authority
- liquidity
- monetary rule
- monetary union
- monetization
- price adjustment mechanism
- seigniorage
- shoeleather costs
- speculative component