

# 18 Buffer Stocks and Price Stability

## Chapter Outline

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## 18.1 Introduction

In Chapter 12, we discussed how distributional conflict between the claimants on real income could trigger inflation if the competing nominal claims (wages, profits) exceeded the actual amount of real income produced in each period.

We saw how this conflict could be triggered by increasing real wage aspirations from workers, rising profit rate aspirations from price setters (firms), and exogenous squeezes on available national income arising from, for example, an imported raw material price rise.

The underlying dynamics of the capitalist system are driven by the target rates of profit determined by firms. In this context, workers can create unemployment by seeking real shares of national income that undermine the capacity of firms to achieve the target rate of profit.

But this is not the typical marginal productivity theory argument that relates real wages to marginal productivity. Rather, the unemployment rises from a reduction in effective demand that follows firms withdrawal of investment spending in response to a squeeze on the rate of profit.

An inflationary spiral arising from demand-pull forces or cost-push forces still requires certain aggregate demand conditions to be maintained if that spiral is to continue.

As we saw in Chapter 12, this observation means that the concept of supply-side inflation blurs with the concept of demand-pull inflation, although their originating forces might seem quite different.

In this Chapter, we compare two broad ways in which price stability may be achieved. We construct the discussion in terms of a comparison between two types of buffer stocks both of which are created by changes in government policy aimed at reducing aggregate demand pressures that are fuelling the inflationary spiral.

The two broad buffer stocks we will compare and contrast are:

- Unemployment Buffer Stocks: Under a NAIRU regime, inflation is controlled using tight monetary and fiscal policy, which leads to a buffer stock of unemployment. This is a very costly and unreliable target for policy makers to pursue as a means for inflation proofing.
- Employment Buffer Stocks: The national government exploits the fiscal power embodied in a fiat-currency issuing system to introduce full employment based on an employment buffer stock approach. The Job Guarantee (JG) model is an example of an employment buffer stock policy approach.

The two approaches to inflation control both introduce so-called inflation anchors. In the NAIRU case, the anchor is unemployment, which serves to discipline the labour market and prevent inflation wage demands from being pursued. Under a Job Guarantee, the inflation anchor is provided in the form of a fixed wage employment guarantee.

To realign nominal aggregate demand growth to be compatible with the available real income, and hence break out of the distributional conflict, the government has to reduce demand growth while trying to promote increased productivity and investment in productive capacity (that is, expanding the supply potential of the economy). Expanding the supply potential of the economy is a medium- to long-term aim of the government and cannot be achieved in the immediate period.

That means that adjustments to aggregate demand growth are likely to be the focus of government policy when an inflationary spiral is threatening. Policy thus has to find a way to induce some labour slack into the overheating economy so that incompatible distributional claims abate.

We will see that a superior use of the labour slack necessary to generate price stability is to implement an employment program for the otherwise unemployed as an activity floor in the real sector, which both anchors the general price level to the price of employed labour of this (currently unemployed) buffer, and can produce useful output with positive supply side effects.

The two different buffer stock approaches also define particular approaches to fiscal policy conduct. The NAIRU approach to price stabilisation sees the government spending on what we call a **quantity rule**. This means that the government budgets for a quantity of dollars to be spent at prevailing market prices to prosecute its socio-economic program.

Spending over-runs are usually met with cut-backs in an attempt to meet the budget estimates.

Conversely, the employment buffer stock approach represents a shift from spending on a **quantity rule** to spending on a **price rule**. Accordingly, the government offers a fixed wage (that is, a price) to anyone willing and able to work, and thereby lets market forces determine the total quantity of government spending that would be required to satisfy the demand for public sector jobs under the Job Guarantee.

In this Chapter we will explain how spending on a price rule provides the government with a superior inflation control mechanism. We will see that when the private sector is inflating, a tightening of fiscal and/or monetary policy can shift workers into a fixed-wage Job Guarantee sector to achieve inflation stability without causing costly unemployment.

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## 18.2 Unemployment Buffer Stocks and Price Stability

There have been two striking developments in economics over the last thirty years. First, a major theoretical revolution has occurred in macroeconomics (from Keynesianism to Monetarism and beyond) since the mid 1970s. Second, unemployment rates have persisted at the highest levels known in the post World War II period and in the current crisis have sky-rocketed upwards.

The concept of full employment as a genuine policy goal was abandoned with the introduction of the natural rate of unemployment hypothesis (Friedman and Phelps) which has become a central plank of current mainstream thinking.

It asserts that there is only one unemployment rate consistent with stable inflation. In the natural rate hypothesis, there is no discretionary role for aggregate demand management and only microeconomic changes can reduce the natural rate of unemployment. Accordingly, the policy debate became increasingly concentrated on deregulation, privatisation, and reductions in the provisions of the Welfare State with tight monetary and fiscal regimes instituted.

The almost exclusive central bank focus on maintaining price stability on the back of an overwhelming faith in the NAIRU ideology has marked the final stages in the evolution of an abandonment of earlier full employment policies.

The modern policy framework is in contradistinction to the practice of governments in the post World War II period to 1975 which sought to maintain levels of demand using a range of fiscal and monetary measures that were sufficient to ensure that full employment was achieved. Unemployment rates were usually below 2 per cent throughout this period.

Under inflation targeting (or inflation-first) monetary regimes, central banks shifted their policy emphasis. They now conduct monetary policy to meet an inflation target and, arguably, have abandoned any obligations they have to support a policy environment which achieves and maintains full employment. Unemployment since the mid-1970s has mostly persisted at high levels although in some economies, low quality, casualised work has emerged in the face of persistently deficient demand for labour hours. In this case, underemployment has replaced unemployment.

As we saw in Chapter 12, underemployment acts in a similar way to unemployment as a disciplining force on workers' wage aspirations and demands. It weakens the capacity of workers to secure nominal wages growth.

Thus, unemployment temporarily balances the conflicting demands of labour and capital by disciplining the aspirations of labour so that they are compatible with the profitability requirements of capital.

Similarly, low product market demand, the analogue of high unemployment as workers' incomes fall, suppresses the ability of firms to pass on prices to protect real margins.

Thus by inducing labour slack into the economy, inflation targeting supported by passive fiscal policy leaning towards austerity, has created what Karl Marx called a "reserve army of the unemployed" and this reduces the chances of an inflationary spiral emerging from the wage bargaining process.

We have seen significant shifts in the distribution of national income towards profits since the mid-1980s as real wages growth has lagged behind productivity growth. This redistribution of national income has overridden the previous outcomes that emerged when strong trade unions met on more equal terms with employer groups to determine a distribution of national income that would be acceptable to both sides of the bargaining process.

But with trade unions weaker as a result of shifting industry composition towards services, smaller public sectors and anti-union legislation, the danger of wage-price spirals igniting have been significantly reduced.

As a consequence, the use of unemployment as a tool to suppress price pressures has, based on the OECD experience since the 1990s, been successful in that inflation is now no longer driven by its own expectations.

The empirical evidence is clear that most OECD economies have not provided enough jobs since the mid-1970s and the conduct of monetary policy has contributed to the malaise. Central banks around the world have forced the unemployed to engage in an involuntary fight against inflation and the fiscal authorities in many cases have further worsened the situation with complementary austerity.

The creation of unemployment buffer stocks is, however, very costly and becomes more costly as time passes.

It is well documented that sustained unemployment imposes significant economic, personal and social costs that include:

- loss of current national output and income;
- social exclusion and the loss of freedom;
- skill loss;
- psychological harm;
- ill health and reduced life expectancy;
- loss of motivation;
- the undermining of human relations and family life;
- racial and gender inequality; and
- loss of social values and responsibility.

These costs are very large and are irretrievable. In terms of the goals of macroeconomic policy they also present a major conflict. As we have learned, a central idea in economics whether it be microeconomics or macroeconomics is efficiency – getting the best out of what you have available. We have discussed the difficulties that economists have in defining such a concept and the ideological dimensions of it.

But economists can put aside their difference and agree that at the macroeconomic level, the “efficiency frontier” is normally summarised in terms of full employment. The hot debate, which we covered in Chapter 12, concerned how we might define full employment. But it is a fact that full employment is a central focus of macroeconomic theory.

Using our macroeconomic resources to the limit is a key part of all macroeconomic theories. The debate is what that limit actually is.

But mass unemployment involves perhaps millions of workers (depending on which nation were are referring to) not producing any output or national income. This would violate our notion of macroeconomic efficiency under any reasonable definition of that term.

Further, persistently high unemployment not only undermines the current welfare of those affected and slows down the growth rate in the economy below its potential, but also reduces the medium- to longer-term capacity of the economy. The erosion of skills and lack of investment in new capacity means that future productivity growth is likely to be lower than if the economy was maintained at higher rates of activity.

The overwhelming quandary that the unemployment buffer stock approach to inflation control faces is whether the economy, once deflated by restrictive aggregate demand management, can be restarted without inflation.

If the underlying causes of the inflation are not addressed a demand expansion will merely reignite the tensions and a wage-price outbreak is likely. As a basis for policy the NAIRU approach is thus severely restrictive and provides no firm basis for full employment and price stability.

Its’ success as an inflation anchor requires a chronic pool of high unemployment.

The disciplining power of unemployment requires that the unemployed constitute a threat to those still in work so that they will moderate their wage demands. However, over time, the threat from this unemployment pool starts to wane as the unemployed endure skill losses and firms introduce new technologies and processes.

In this case, the so-called NAIRU has to be pushed higher and higher by contractionary fiscal and monetary policy for the same degree of threat to be maintained.

On any reasonable grounds, this approach to price stability is very costly and ultimately, unworkable in a modern economy. High and sustained levels of unemployment, ultimately, undermine the social and political stability of a nation, which creates unintended costs that go far beyond those itemised above.

### 18.3 Measuring the Costs of Unemployment Buffer Stocks

Under inflation targeting monetary policy regimes, central bankers use the persistent pool of unemployed (and other forms of labour underutilisation, for example, underemployment) as a buffer stock to achieve a desirable price level outcome. If their inflation outlook rises above their target rate they will induce higher rates of unemployment by increasing in interest rates until they are satisfied their inflation target is being met.

While some extreme elements of the profession, who still consider rational expectations to be a reasonable assumption, will deny any real output effects, most economists acknowledge that any disinflation engendered by this approach will be accompanied by a period of reduced output and increased unemployment (and related social costs) because a period of (temporary) slack is required to break inflationary expectations.

The real question then is how large are the output losses following discretionary disinflation? There is overwhelming evidence to suggest that the cumulative costs of this strategy in real terms have been substantial.

Economists measure these real costs in terms of **sacrifice ratios**, which is the accumulated loss of output during a defined disinflation episode as a percentage of initial output expressed as ratio of the accumulated reduction in the inflation rate.

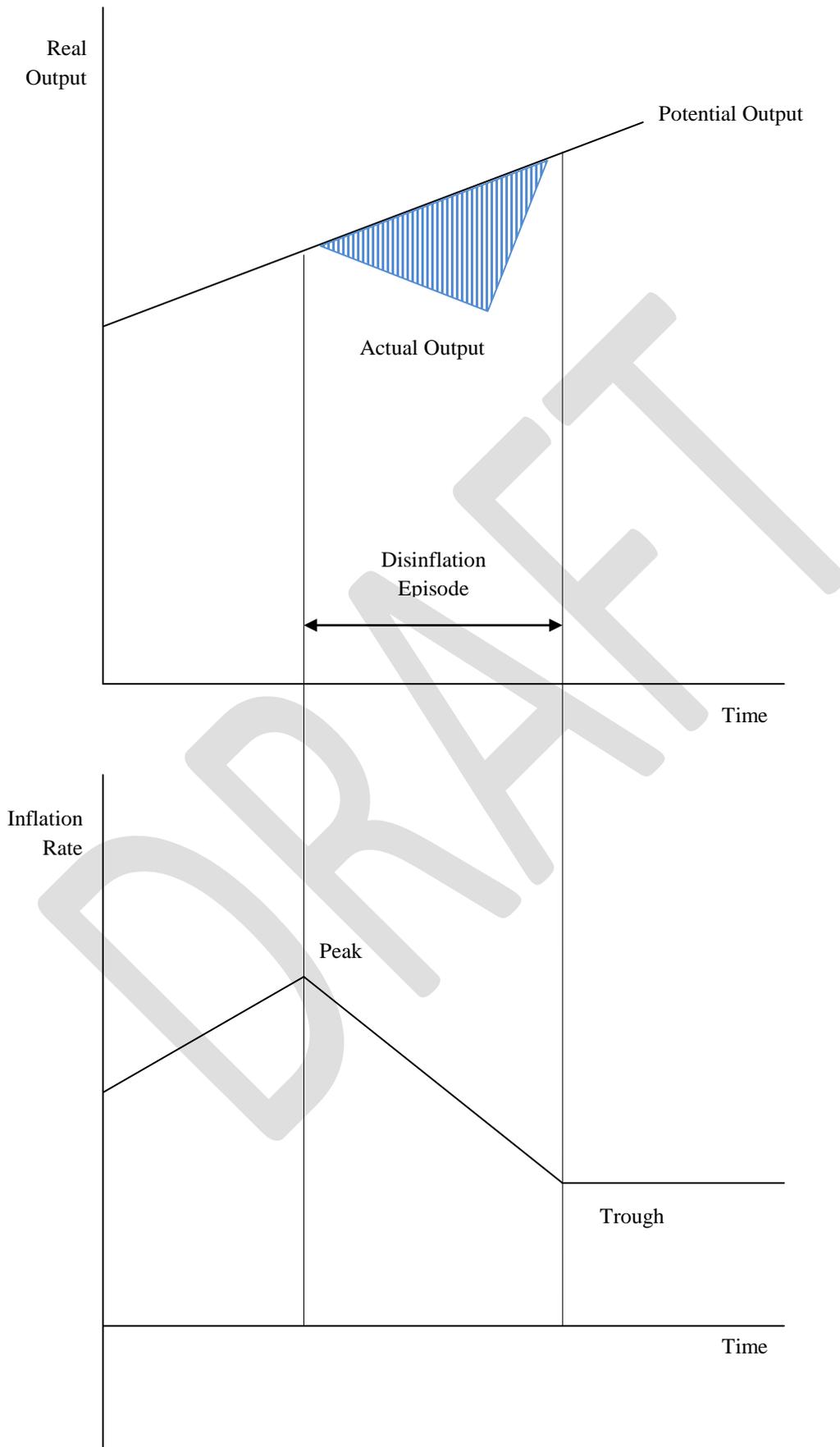
For example, if the sacrifice ratio was two it would mean that a one-point reduction in the trend inflation rate is associated with a GDP loss equivalent to 2 per cent of initial output.

Figure 18.1 is a simple graphical depiction of the sacrifice ratio concept and captures the way most empirical studies have pursued the estimation of sacrifice ratios.

The cumulative output loss as a consequence of the actual output falling below potential output is depicted by the shaded area. In Figure 18.1, we have deliberately constructed output to resume at its potential level at the exact end of the disinflation period (defined as the period between the peak inflation and the trough inflation). This is the normal assumption adopted in empirical studies.

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Figure 18.1 Sacrifice Ratios and Disinflation Episodes



The depiction in Figure 18.1 assumes that the disinflation episode has a relatively finite, short-term impact on real GDP growth and before long the actual growth path converges on the potential path (which was unchanged by the policy change).

However, in the real world, it is clear that a prolonged period of reduced real GDP growth lasts beyond the formal disinflation period and that the potential real GDP growth path also declines as the collateral damage of low confidence among firms curtails investment (which slows down the growth in productive capacity).

As a consequence, the estimates of sacrifice ratios, based on the conception shown in Figure 18.1, will be biased downwards because they ignore the impacts of output persistence and hysteresis.

The concept of **persistence** means that actual output remains below its potential after the disinflation period has finished. The longer this output gap exists, the longer is the persistence.

Relatedly, **hysteresis** (in this context) refers to the permanent losses of potential output that arise as a consequence of the disinflation policy.

The important point is that to accurately estimate the sacrifice ratio, researchers must not only consider the short-term losses but also the longer-term losses arising from persistence and hysteresis.

Figure 18.2 stylises the impacts of persistence and hysteresis arising from a disinflationary policy stance. It is clear that the real output losses are much greater than would be estimated using the restricted concept shown in Figure 18.1.

From the inflation peak, real output falls immediately as before. But after a time, the reduced levels of economic activity erodes confidence among consumers and firms. Consumers fearing even higher unemployment restrict consumption spending and firms respond to the lack of sales order by cutting investment plans.

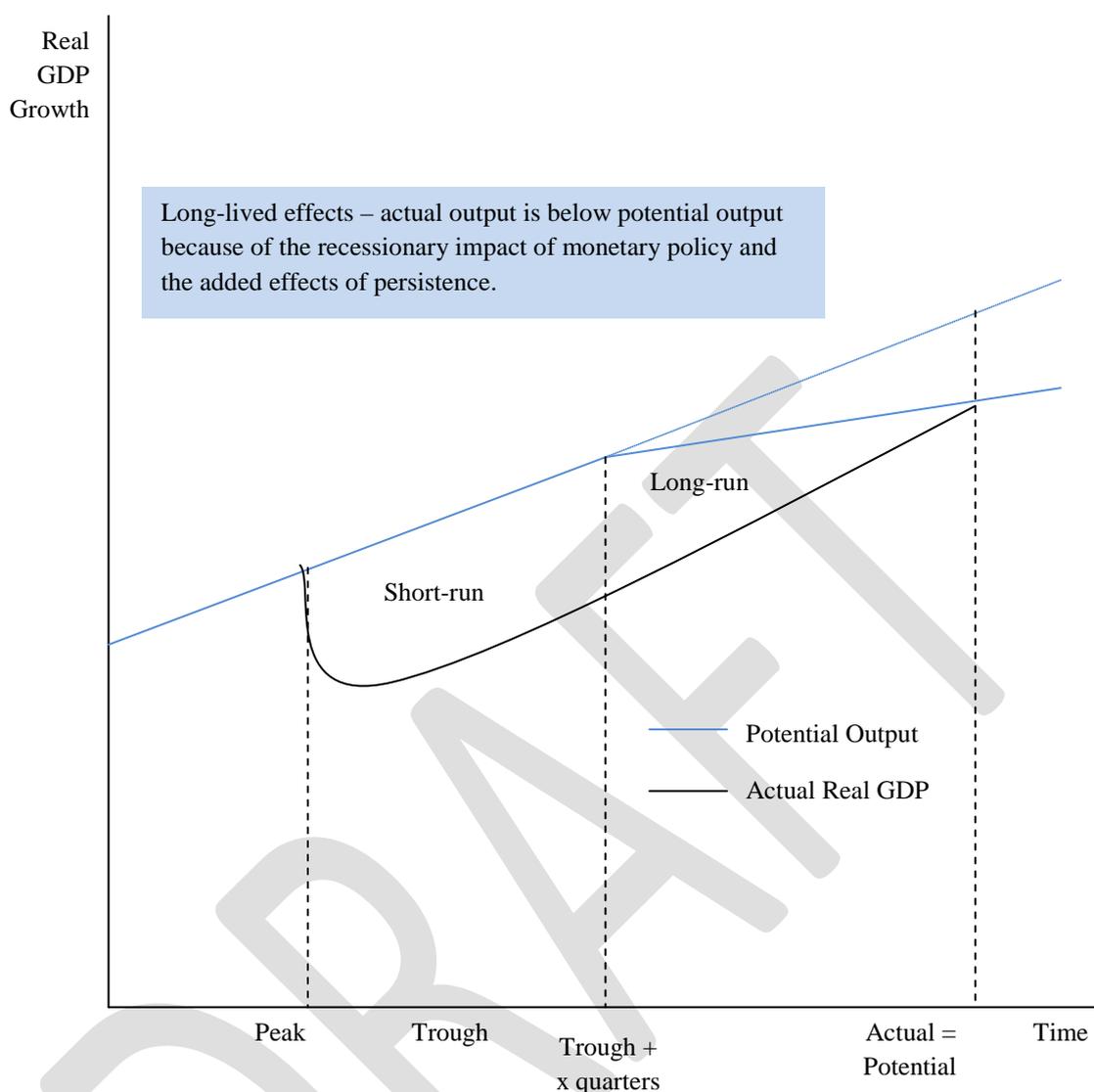
Two impacts occur as a result: (a) the potential real output path falls (from Trough + x quarters on Figure 18.2), reducing the growth capacity of the economy; and (b) actual real output deviates from its potential path for much longer than otherwise would have been the case.

As a result, the estimated costs of the disinflation are much larger. Eventually actual and potential may converge but at that point there is less output and national income and almost certainly, persistently higher unemployment.

Economies reach a difficult point where the mass unemployment, initially caused by the failure of aggregate demand induced by the contractionary policy stance of the government, also becomes capacity constrained as a result of the falling potential output level.

The fiscal austerity policies pursued by governments during the global financial crisis also have had this impact. It is much harder to then restore robust growth because it takes longer periods to also ensure there is potential capacity to support it without triggering inflation.

Figure 18.2 Sacrifice Ratios with Persistence and Hysteresis



Mitchell and Muysken (2008) drew on an extensive literature analysis and their own empirical work to conclude the following:

- Formal econometric analysis does not support the case that inflation targeting delivers superior economic outcomes in terms of reducing the costs of disinflation. Both targeters and non-targeters enjoyed variable outcomes and there is no credible evidence that inflation targeting improves performance as measured by the behaviour of inflation, output, or interest rates.
- There is no credible evidence that central bank independence and the alleged credibility bonus that this brings, bring faster adjustment of inflationary expectations to the policy announcements. There is no evidence that targeting affects inflation behaviour differently.
- Sacrifice ratio estimates confirm that disinflations are not costless; the average ratio for all countries over the 1970s and 1980s was around 1.3 to 1.4. Significantly, the average estimated GDP sacrifice ratios have increased over time, from 0.6 in the 1970s to 1.9 in the 1980s and to 3.4 in the 1990's. That is, on average reducing trend inflation by one percentage point results in a 3.4 per cent cumulative loss in real GDP in the 1990s.
- Australia, Canada, and the UK, who announced formal policies of inflation targeting in the 1990s, do not have substantially lower sacrifice ratios compared to G7 countries who did not announce such policies. Australia does record a lower average ratio during the targeting

period than in the 1980s, averaged across the three methods it is 1.2 per cent, however this figure is not lower than the average for all previous periods. Canada records a higher sacrifice ratio in the 1990s of 3.6 per cent. The ratio for the UK during inflation targeting is significantly higher at 2.5 per cent (relative to quite low sacrifice ratios in previous periods). Italy, Germany, Japan and the US, average 0.6, 2.3, 2.9 and 5.8, respectively.

The evidence is clear that inflation targeting countries have failed to achieve superior outcomes in terms of output growth, inflation variability and output variability; moreover there is no evidence that inflation targeting has reduced persistence.

Other factors have been more important than targeting per se in reducing inflation. Most governments adopted fiscal austerity in the 1990s in the mistaken belief that budget surpluses were the exemplar of prudent economic management and provided the supportive environment for monetary policy.

The fiscal cutbacks had adverse consequences for unemployment and generally created conditions of labour market slackness even though in many countries the official unemployment fell. However labour underutilisation defined more broadly to include, among other things, underemployment, rose in the same countries.

Further, the comprehensive shift to active labour market programs, welfare-to-work reform, dismantling of unions and privatisation of public enterprises also helped to keep wage pressures down.

It is clear from statements made by various central bankers that a belief in the long-run trade off between inflation and employment embodied in the NAIRU has led them to pursue an inflation-first strategy at the expense of unemployment.

Disinflations are not costless irrespective of whether targeting is used or not. An average sacrifice ratio of 3.5 in the 1990s means that any attempt to bring down inflation nowadays with 1 per cent-point will result in a cumulative loss in GDP of 3.5 per cent on average. In terms of unemployment the latter can be interpreted roughly speaking as a cumulative increase by 7 per cent.

The increase in the sacrifice ratio over time illustrates that reduced inflation variability allows more certainty in nominal contracting with less need for frequent wage and price adjustments. The latter in turn means less need for indexation and short-term contracts and leads towards a flatter short-run Phillips curve. Thus a consequence of inflation targeting is that the costs of disinflation become higher.

The late Franco Modigliani (2000: 3), who was one of the economists who coined the term NAIRU reflected on the legacy he had created:

Unemployment is primarily due to lack of aggregate demand. This is mainly the outcome of erroneous macroeconomic policies ... [the decisions of Central Banks] ... inspired by an obsessive fear of inflation, ... coupled with a benign neglect for unemployment ... have resulted in systematically over tight monetary policy decisions, apparently based on an objectionable use of the so-called NAIRU approach. The contractive effects of these policies have been reinforced by common, very tight fiscal policies.

One of the major problems of inflation targeting as a policy paradigm is that it has been accompanied by a view that fiscal policy has to be passive and not compromise the inflation target. As a result economies have tolerated persistently high rates of labour underutilisation despite having achieved low inflation.

As noted earlier in the Chapter, persistent unemployment results not only in massive losses of real output and national income, but other real costs are also endured by the nation, including the depreciation of human capital, family breakdowns, increasing crime, and increasing medical costs.

These additional costs, in particular the depreciation of human capital, also mean that the effectiveness of the unemployment pool as a price anchor deteriorates over time, with ever larger numbers of fresh unemployed or underemployed required to function as a price anchor that stabilises wages.

Given the scale of these costs, it is unlikely that using a persistent pool of unemployed (or casualised underemployed) is the most cost effective way to achieve price stability.

## 18.4 Employment Buffer Stocks and Price Stability

An understanding of the macroeconomic principles developed in the course thus far would suggest that a better alternative to the unemployment buffer stock to price stability would be to utilise an employed buffer stock approach.

This might also be conceived as an alternative way of managing the unemployment program that the government deems necessary to attain price stability.

Thus a superior use of the labour slack necessary to generate price stability is to implement an employment program for the otherwise unemployed as an activity floor in the real sector, which both anchors the general price level to the price of employed labour of this (currently unemployed) buffer and can produce useful output with positive supply side effects.

Between 1945 and the mid-1970s, western governments realised that with deficit spending supplementing private demand, they could ensure that all workers who wanted to work could find jobs. Although private employment growth was relatively strong during this period, governments were important employers in their own right, and also maintained a buffer of jobs for the least skilled workers; for example, in the major utilities, the railways, local public services and major infrastructure functions of government.

By absorbing workers who lost jobs when private investment declined, governments acted as an economic safety valve.

British economist Paul Ormerod (quote from the *Death of Economics*) noted that the economies that avoided high unemployment in the 1970s maintained a:

... sector of the economy which effectively functions as an employer of last resort, which absorbs the shocks which occur from time to time, and more generally makes employment available to the less skilled, the less qualified.

He concluded that societies with a high degree of social cohesion (such as Austria, Japan and Norway) were willing to broaden their concept of costs and benefits of resource usage to ensure that everyone had access to paid employment opportunities.

The employment buffer stock approach – which is referred to in the literature as the Job Guarantee (JG) – defines a policy framework where the government operates a buffer stock of jobs to absorb workers who are unable to find employment in the private sector.

Analogous to the central bank's function of lender of the last resort, the JG functions as a buffer which absorbs all potential employment, at an acceptable minimum wage. In this sense, the government acts as an employer of the last resort.

While it is easy to characterise the JG as purely a public sector job creation strategy, it is important to appreciate that it is actually a macroeconomic policy framework designed to deliver full employment and price stability based on the principle of buffer stocks where job creation and destruction is but one component.

Under a JG, the government thus provides an unconditional, open-ended job offer at a given wage to anyone who desires to work. Instead of a person becoming unemployed when aggregate demand falls below the level required to maintain full employment, the person would enter the JG workforce.

The JG pool expands (declines) when private sector activity declines (expands). The JG thus fulfils an absorption function, which minimises the costs associated with the flux of the economic activity as aggregate demand fluctuates.

In the event of a decline in aggregate demand, total demand for non-JG labour workers declines according to the employment requirements function we defined in Chapter 9. In this situation, the workers who were displaced from their jobs would have an option – accept a JG position or wait for conditions to improve in the non-JG economy.

It is clear that the choice facing workers will be influenced by several factors. First, the government may offer workers the choice between the JG wage and the unemployment benefit, the latter being lower. Second, some workers, especially those in higher-skilled positions, may receive redundancy payments and use these to support themselves through the spell of unemployment. Economists call this response – wait unemployment. Some workers may feel that accepting a low-skill JG job would disadvantage them professionally and thus wait for circumstances to improve.

We assume for the moment that the Job Guarantee policy does not offer an unemployment benefit and that most displaced workers will prefer a JG position over wait unemployment. These assumptions serve to simplify the analysis and relaxing them does not alter the basic dynamics of the system.

When private economic activity picks up, workers would be bid out of the JG pool by employers and the buffer stock of jobs would contract.

### **The JG Wage**

Why would workers accept these bids? The “buffer stock” employees would be paid an minimum wage, which would define the level of income necessary for a full-time worker to enjoy an adequate social and material existence.

The nation always remains fully employed, with only the mix between private and public sector employment fluctuating as it responds to the spending decisions of the private sector. Since the JG wage is open to everyone, it will functionally become the national minimum wage.

While it is preferable to avoid disturbing the private sector wage structure when the JG is introduced, a case can be made to offer the JG wage at a level higher than the existing private minimum if it is thought that productivity is too low in the economy.

This is particularly relevant in developing economies where many market-based jobs pay wages that are below the poverty line and provide no incentives for employers to invest in more productive capital, or for workers to invest in human capital.

The minimum wage should not be determined by the capacity to pay of the private sector. It should be an expression of the aspiration of the society of the lowest acceptable standard of living. Any private operators who cannot “afford” to pay the minimum should exit the economy.

The Government would supplement the JG earnings with a wide range of social wage expenditures, including adequate levels of public education, health, child care, and access to legal aid. Further, the JG policy does not replace conventional use of fiscal policy to achieve social and economic outcomes.

In general, the JG would be accompanied by higher levels of public sector spending on public goods and infrastructure. These supplements would be in addition to the scheme but not essential for the scheme to function effectively.

### **The JG as an Automatic Stabiliser**

The JG wage thus defines the wage floor for the economy and serves as an automatic stabiliser, similar to the tax system.

Recall that automatic stabilisation refers to the components of the government budget, which rise and fall as the economic cycle fluctuates without there being any explicit change in government spending or tax settings.

They operate to stabilise the economic cycle providing a floor in the fall in aggregate demand during an economic downturn and a ceiling in the demand as the economy grows. At full employment, the automatic stabiliser component of aggregate demand is zero.

Thus, when the economy is in decline, tax revenue falls and welfare payments rise which expands the budget position of the government automatically. The introduction of the JG would have the same counter-cyclical impact. When the economy was faltering, the spending associated with the JG would rise and vice-versa when times were good.

In this regard, the JG is a superior (more powerful) automatic stabiliser than a system of unemployment benefits (under the unemployment buffer stock option) because aggregate demand slumps less and therefore the positive impact on real output is greater than would be the case if the government merely paid unemployment benefits.

Automatic stabilisers have the desirable characteristic of providing immediate, counter-cyclical spending injections (or withdrawals) when private activity fluctuates. They avoid the so-called policy lags which relate to the time delays in the government identifying that a significant shift in private demand has occurred, designing a policy response to that shift, providing appropriate legislation to support an intervention, and then executing the intervention.

In some cases, the time delays can result in the major part of the policy intervention arriving too late and working to destabilise the cycle. For example, if by the time the government has designed and implemented a

new discretionary spending injection, the private sector has already resumed trend spending growth, then the impulse of government spending might lead to the economy overheating.

The fixed wage offer that defines the JG policy also serves to stabilise the growth rate in money wages in the economy and thus provides a nominal anchor against inflation.

### Advanced Material: Buffer Stocks in Agriculture

Buffer stocks have long been used in agriculture and commodity production. The JG bears many similarities (and a significant difference) with agricultural price support buffer stock schemes that governments have regularly used to stabilise prices and incomes in the agricultural sector.

For example, in November 1970, the Australian Government introduced the Wool Floor Price Scheme. The scheme was relatively simple and worked by the Government establishing a floor price for wool after hearing submissions from the Wool Council of Australia and the Australian Wool Corporation (AWC).

The aim of the system was to stabilise farm incomes and led to an agreed price for wool being paid to the farmers. The Government then stabilised the price at this guaranteed level by using the AWC to purchase stocks of wool in the auction markets if demand was low and selling it if demand was high.

By being prepared to hold “buffer wool stocks” in times of low demand and release them again in times of high demand, the government was able to guarantee incomes for the farmers around the stable price.

The contention that ultimately led to the demise of the system was whether the guarantee constituted a reasonable level of output in a time of declining demand. Farmers clearly had an incentive to over-produce wool knowing that the government would buy any excess not demanded by the auction markets.

The JG approach is also based on the maintenance of a variable buffer stock of jobs in line with fluctuations in private demand. However, the weaknesses of the agricultural scheme do not apply to a JG.

First, if there is a price guarantee below the prevailing market price (the JG wage) and a buffer stock of working hours constructed to absorb the excess supply at the current market price, then a form of full employment can be generated without tinkering with the price structure.

Second, the incentives to over-production in commodity buffer stock systems do not apply to maintaining a labour buffer stock as no one is concerned that employed workers would have more children than unemployed workers.

Benjamin Graham wrote in the 1930s about the idea of stabilising prices and standards of living by surplus storage. He documents how a government might deal with surplus production in the economy

[The] State may deal with actual or threatened surplus in one of four ways: (a) by preventing it; (b) by destroying it; (c) by “dumping” it; or (d) by conserving it.

In the context of an excess supply of labour, governments now tend to choose the dumping strategy via the unemployment buffer stock approach (the NAIRU). However, it is less wasteful to use the conservation approach, which is reflected in the JG framework.

Graham (1937: 34) noted:

The first conclusion is that wherever surplus has been conserved primarily for future use the plan has been sensible and successful, unless marred by glaring errors of administration. The second conclusion is that when the surplus has been acquired and held primarily for future sale the plan has been vulnerable to adverse developments ...

This distinction is important when we conceive of the way employment buffer stock models might work in practice. The Australian Wool Scheme was an example of storage for future sale and was not motivated to help the consumer of wool but the producer.

The JG policy is an example of storage for use where the “reserve is established to meet a future need which experience has taught us is likely to develop” (Graham, 1937: 35).

## Inflation Control and The JG

While introducing a public sector job creation capacity to the economy, the JG is better thought of as a macroeconomic policy framework designed to ensure that full employment and price stability is maintained over the private sector economic cycle.

What are the mechanics of inflation control under a JG? In Chapter 12, we examined the way in which incompatible claims over the available real income could cause wage-price pressures to escalate into an inflationary episode as the claimants (labour and capital) attempted to defend their real income shares.

In an unemployment buffer stock system the approach to price control uses unemployment to discipline wage demands by workers and to soften the product market to discourage a profit-margin push by firms as a means of curbing wage-price pressures and maintaining stable inflation.

We define the Buffer Employment Ratio (BER) as:

$$(18.1) \quad \text{BER} = \text{JGE}/\text{E}$$

where JGE is total employment in the Job Guarantee buffer stock and E is total employment in the economy. The BER rises when the JG pool expands and falls when the JG pool contracts.

The JG approach stands in contradistinction to the NAIRU approach because instead of manipulating the employment rate by creating unemployment when wage-price pressures develop, the government manipulates the BER.

When the level of private sector activity and the distributional conflict is such that wage-price pressures form as the precursor to an inflationary episode, the government manipulates fiscal and monetary policy settings (preferably fiscal policy) to reduce the level of private sector demand.

Labour is then transferred from the inflating private sector to the “fixed wage” JG sector and the BER rises. This will eventually ease the inflationary pressures arising from the wage-price conflict.

There can be no inflationary pressures arising directly from a policy where the government offers a fixed wage to any labour that is unwanted by other employers.

The JG involves the government **buying labour off the bottom**, in the sense that minimum wages are not in competition with the market-sector wage structure. By definition, the unemployed have no market price because there is no market demand for their services.

By not competing with the private market, the JG would avoid the inflationary tendencies of past Keynesian policies, which attempted to maintain full capacity utilisation by ‘hiring off the top’ (that is, making purchases at market prices and competing for resources with all other demand elements).

The BER conditions the overall rate of wage demands. When the BER is high, real wage demands will be correspondingly lower and the capacity of firms to push profit margins up is reduced.

So instead of a buffer stock of unemployed being used to discipline the distributional struggle, the JG policy achieves this via compositional shifts in employment – transfers in and out of the JG pool.

Importantly, the JG can also deal with a supply-shock (such as a rise in a key non-labour raw material) that generates incompatible claims on national income that ultimately cause inflation.

The NAIRU defines the unemployment buffer stock associated with stable inflation. In a JG setting, we define the Non-Accelerating Inflation Buffer Employment Ratio (NAIBER) as the BER that results in stable inflation via the redistribution of workers from the inflating private sector to the fixed price JG sector.

The NAIBER is a full employment steady state JG level, which is dependent on a range of factors including the historical path the economy has taken.

An aim of government is to minimise the NAIBER so that higher levels of non-JG employment can be sustained with stable inflation. Initiatives that may reduce the value of the NAIBER include public education to stimulate skill development and engender high productivity growth; institutionalised wage setting processes where productivity growth is shared equitably across all income claimants, and restrictions on anti-competitive cartels that may add pressures for profit margin push.

However, while central banks and treasuries devote a lot of resources in trying to estimate the NAIRU, we consider it would not be worth trying to estimate or target a particular NAIBER. The point is that the aim of policy is to fully employ labour while maintaining price stability.

## A Plausible Adjustment Path

A plausible story to show the dynamics of a JG economy compared to a NAIRU economy would begin with an economy with two labour sub-markets: Sector A (primary) and Sector B (secondary) which broadly correspond to the dual labour market depictions we examined in Chapter 14.

Assume as before that firms set prices according to mark-ups on unit costs in each sector.

Wage setting in Sector A is contractual and responds in an inverse and lagged fashion to relative wage growth (Sector A/Sector B) and to the wait unemployment level (displaced Sector A workers who think they will be re-employed soon in Sector A).

So when the ratio of Sector A wages to Sector B falls, workers in Sector A will eventually seek to reinstate the past relativity, which reflects their sense of worth in the wage structure and their bargaining capacity as skilled workers. Increasing numbers of unemployed workers waiting for work in Sector A (but not taking Sector B jobs) also depress wages growth in Sector A.

In a non-JG economy, a government stimulus increases output and employment in both sectors immediately. Wages are relatively flexible upwards in Sector B and respond immediately. The compression of the Sector A/Sector B wage relativity stimulates wage growth in Sector A after a time.

Wait unemployment falls due to the rising employment demand in Sector A but also rises due to the increased probability of getting a job in Sector A. That is, workers who had previously taken Sector B jobs in desperation or were classified as being outside the labour force may leave their Sector B jobs or re-enter the labour force in expectation of a prospect of a better paying Sector A job, which is more in line with their skill levels. The net effect of these two movements is unclear at the conceptual level.

The total unemployment rate falls after participation effects are absorbed. The wage growth in both sectors may force firms to increase prices, although this will be attenuated somewhat by rising productivity as utilisation increases.

A combination of wage-wage and wage-price mechanisms in a soft product market can then drive inflation. These are the type of adjustments that are described in a Phillips curve economy.

To stop inflation, the government has to repress demand. The higher unemployment brings the real income expectations of workers and firms into line with the available real income and the inflation stabilises – a typical NAIRU story.

Now consider what would be different in a JG economy. Introducing the JG policy into the depressed economy puts pressure on Sector B employers to restructure their jobs in order to maintain a workforce.

For given productivity levels, the JG wage constitutes a floor in the economy's cost structure. The dynamics of this economy change significantly.

The elimination of all but wait unemployment in Sector A and frictional unemployment does not distort the relative wage structure so that the wage-wage pressures arising from variations in the Sector A/Sector B relativity that were prominent previously, are now reduced.

The wages of JG workers (and hence their spending) represents a modest increment to nominal demand given that the state is typically supporting them on unemployment benefits. It is possible that the rising aggregate demand softens the product market, and demand for labour rises in Sector A.

But there are no new problems faced by employers who wish to hire labour to meet the higher sales levels in this environment. They must pay the going rate, which is still preferable, to appropriately skilled workers, than the JG wage level. The rising aggregate demand *per se* does not invoke inflationary pressures if firms increase capacity utilisation to meet the higher sales volumes.

With respect to the behaviour of workers in Sector A, one might think that the provision of the JG will lead to workers quitting bad private employers. It is clear that with a JG, wage bargaining is freed from the general threat of unemployment.

However, it is unclear whether this will lead to higher wage demands than otherwise. In professional occupational markets, some wait unemployment will remain. Skilled workers who are laid off are likely to receive payouts that forestall their need to get immediate work.

They have a disincentive to immediately take a JG job, which is a low-wage and possibly stigmatised option. Wait unemployment disciplines wage demands in Sector A. However, demand pressures may eventually exhaust this stock, and wage-price pressures may develop.

A crucial point is that the JG does not rely on the government spending at market prices which then exploits the expenditure multiplier to achieve full employment as is characteristic of traditional Keynesian pump-priming. In this sense, traditional Keynesian remedies fail to provide an integrated full employment-price anchor policy framework.

From the above analysis it is clear that the introduction of a JG eliminates the traditional Phillips curve trade-off.

Consider Figure 18.3. In a Phillips curve world, imagine that the unemployment rate was currently at  $UR_A$  and the inflation rate was  $I_A$ .

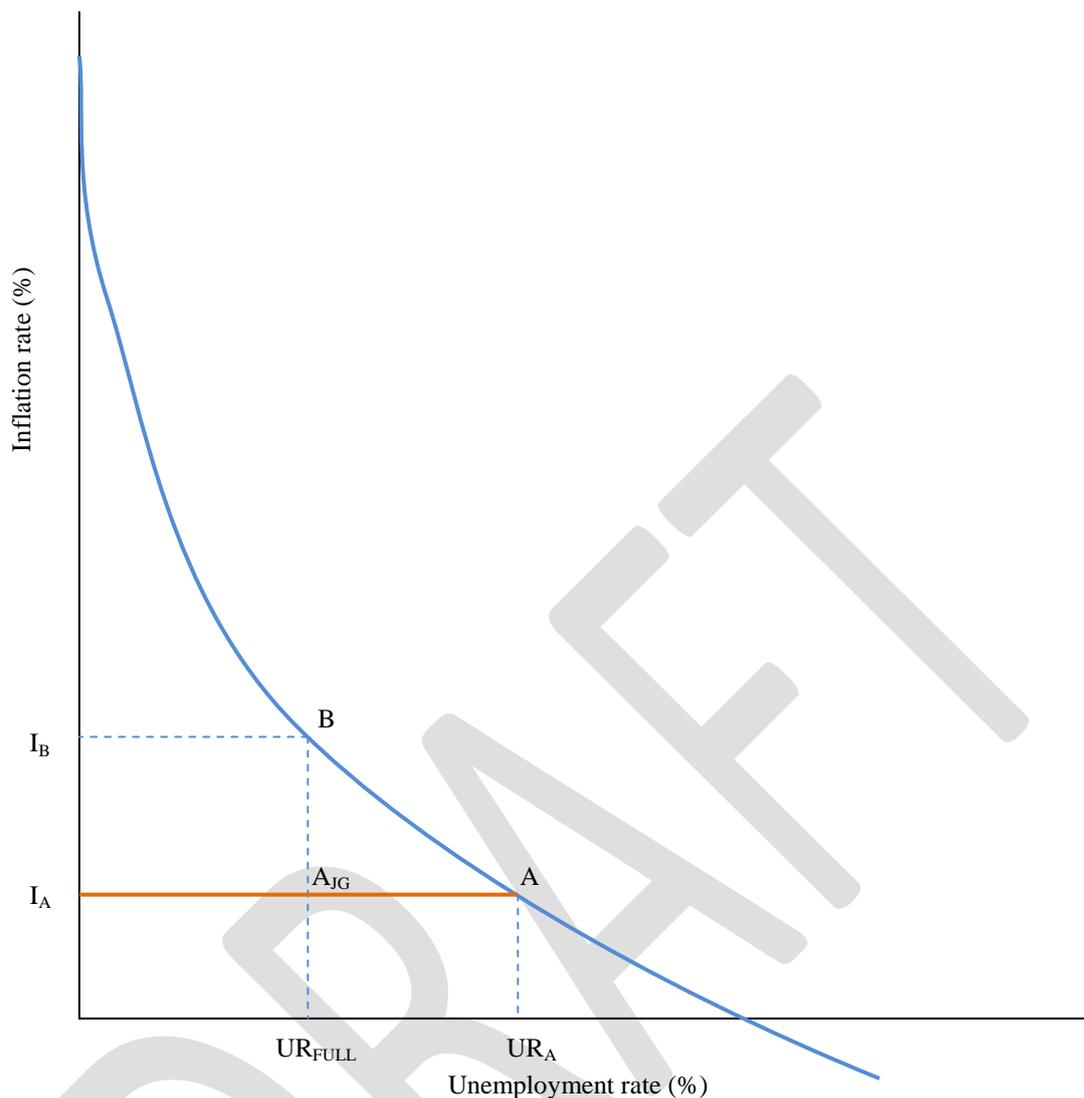
The full employment unemployment rate is  $UR_{FULL}$ , which denotes frictional unemployment.

The government is under pressure to reduce the excessive unemployment and if it increased aggregate demand the wage-wage and wage-price pressures would drive the inflation rate up to  $I_B$  although it could move along the Phillips curve from Point A to Point B and achieve full employment.

However, there is no guarantee that the inflation rate would remain stable at  $I_B$ . Certainly, the NAIRU model would predict that bargaining agents would incorporate the new higher inflation rate into their expectations and the Phillips curve would start moving out. Whether that happens is not relevant here and we considered those issues in Chapter 12.

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Figure 18.3 The Job Guarantee and The Phillips Curve



If the government initially responded to the excessive unemployment at Point A by introducing a Job Guarantee it could absorb workers in jobs commensurate with the difference between  $UR_A$  and  $UR_{FULL}$ , although in reality as more work was available, workers from outside the labour force (the hidden unemployed) would also take JG jobs in preference to remaining without income.

But whatever the quantum of workers that would initially be absorbed in the JG pool, the economy would move from A to  $A_{JG}$  rather than from A to B.

In other words, the introduction of the JG eliminates the Phillips curve. The macroeconomic opportunities facing the government are not dictated by a perceived unemployment and inflation trade-off and any fear that that trade-off might be unstable (as in a NAIRU world).

Rather full employment and price stability go hand in hand.

## Would The NAIBER Be Higher Than The NAIRU?

We have learned that the NAIRU defines the unemployment buffer stock associated with stable inflation whereas in the employment buffer stock approach to price stability, the Non-Accelerating Inflation Buffer Employment Ratio (NAIBER) is the BER that results in stable inflation via the redistribution of workers from the inflating private sector to the fixed price JG sector.

An interesting question to explore relates to the relative sizes of the NAIBER vis-à-vis the NAIRU. There are two arguments that might be used to argue that the NAIBER would have to be larger than the NAIRU for an equivalent amount of inflation control.

There are two strands to this argument. First, the intuitive, but somewhat inexact view is that because JG workers will have higher incomes (than when they were unemployed) a switch to this policy would always see demand levels higher than under a NAIRU world.

As a matter of logic then, if the NAIRU achieved output levels commensurate with price stability then, other things equal, a higher demand level would have to generate inflationary impulses. So according to this view, the level of unemployment associated with the NAIRU is intrinsically tied to a unique level of demand at which inflation stabilises.

Second, and related, it is claimed that the introduction of the JG reduces the threat of unemployment which serves to discipline the wage setting process. The main principle of a buffer stock scheme like the JG is straightforward – it buys off the bottom (at zero bid) and cannot put pressure on prices that are above this floor. The choice of the floor may have a once-off effect on the existing price level only.

It should be noted that while it is clear that JG workers will enjoy higher purchasing power under a JG compared to their outcomes under a NAIRU policy, it is not inevitable that aggregate demand overall would rise with the introduction of JG.

But assuming aggregate demand is higher when the JG is introduced than that which prevailed in the NAIRU economy, we might wonder why inflation is not inevitable as we replace unemployment with (higher paying) employment.

Rising demand per se does not necessarily invoke inflationary pressures, because by definition the extra liquidity is satisfying a net savings desire by the private domestic sector.

Additionally, in demand constrained economies, firms are likely to increase capacity utilisation to meet the higher sales volumes rather than risk losing market share by increasing prices. There would be no obvious cost pressures forcing the firms to increase prices.

Further, the aggregate demand impulse required to return the economy to what we might call “loose” full employment under the JG is less than would be required in a NAIRU economy where the government would have to pay market prices to bring the idle resources back into productive use.

In that context, it is clear that if there were any demand-pull inflation it would be lower under the JG. So there are no new problems faced by employers who wish to hire labour to meet the higher sales levels.

Additionally, any initial rise in demand will stimulate private sector employment growth while reducing JG employment and spending.

The impact on the price level by the introduction of the JG will also depend on qualitative aspects of the JG pool relative to the NAIRU unemployment buffer. It is here that the so-called threat debate enters.

In the NAIRU logic, workers may consider the JG to be a better option than unemployment. Without the threat of unemployment, wage bargaining workers then may have less incentive to moderate their wage demands notwithstanding the likely disciplining role of wait unemployment in skilled labour markets.

However, when wait unemployment is exhausted private firms would still be required to train new workers in job-specific skills in the same way they would in a non-JG economy.

The functioning and effectiveness of the buffer stock in question is critical to its function as a price anchor. There is overwhelming evidence that long-term unemployment generates costs far in excess of the lost output that is sacrificed every day the economy is away from full employment.

It is clear that the more immediately employable are the unemployed, the better the price anchor will function. After an extended downturn the unemployment buffer stock will be composed of a significant proportion of long-term unemployed.

JG workers are far more likely to have retained higher levels of skill than those who are forced to succumb to lengthy spells of unemployment. It is thus reasonable to assume that an employer would consider a JG worker, who is already demonstrating a commitment to working, a superior training prospect relative to an unemployed and/or hidden unemployed worker.

The JG policy would thus reduce the hysteretic inertia embodied in the long-term unemployed and allow for a smoother private sector expansion. Therefore JG workers would constitute a more credible threat to the current private sector employees than, say, the long-term unemployed.

When wage pressures mount, an employer would be more likely to exercise resistance if she knew she could hire from the fixed-price JG pool.

This changes the bargaining environment rather significantly because firms now have reduced hiring costs. Previously, the same firms would have lowered their hiring standards and provided on-the-job training and vestibule training in as the labour market tightened.

As a consequence, longer term planning with cost control would be enhanced. So in this sense, the inflation restraint exerted via the NAIBER is likely to be more effective than using a NAIRU strategy.

In summary, the JG buffer stock is likely to be a qualitatively superior inflation fighting pool than the unemployed stock under a NAIRU. In that sense, the NAIBER will be lower than the NAIRU which means that employment can be higher before the inflation barrier is reached.

Another associated factor relates to the behaviour of professional occupational markets. In those markets, while any wait unemployment will discipline wage demands, the demand pressures may eventually exhaust this stock and wage-price pressures may develop.

With a strong and responsive tertiary education sector combined with strong firm training, processes skill bottlenecks can be avoided more readily under the JG than with an unemployed buffer stock in place. The JG workers would already be maintaining their general skills as a consequence of an on-going attachment to the employed workforce.

The qualitative aspects of the unemployed pool deteriorate with duration making the transition back in the labour force more problematic. As a consequence, the long-term unemployed exert very little downward pressure on wages growth because they are not a credible substitute.

### **Open Economy Impacts**

The JG requires a flexible exchange rate to be effective. A once-off increase in import spending is likely to occur as JG workers have higher disposable incomes.

In most nations, the impact would be modest. We would expect any modest depreciation in the exchange rate to improve the contribution of net exports to local employment as explained in Chapter 16.

### **Employment Buffer Stocks and Responsible Fiscal Design**

In an open economy, if there was no government spending or taxation (that is, a budget balance of zero) the level of economic activity (output) will be determined by private domestic spending (consumption plus investment) and net external spending (exports minus imports). If one or more of those spending sources declines, then activity will decline.

In Chapters 7 and 12, we learned that a spending gap is defined as the spending required to create demand sufficient to elicit an output level, which at current levels of productivity, will provide enough jobs (measured in working hours) for all the workers who desire to work.

A zero spending gap occurs when there is full employment. We assume that there is no capacity-constrained unemployment where the level of capital stock is unable to support enough jobs to satisfy the available labour supply at existing productivity levels.

The role of aggregate government policy interventions is to ensure there is no spending gap. If we assume that monetary policy changes are relatively ineffective as a counter-stabilisation policy tool, then if private spending declines from a given position of full employment, the only way that the spending gap can be filled is via a fiscal stimulus – directly through government spending and/or indirectly, via a tax cut, which will increase private disposable income and stimulate subsequent private spending.

To recapitulate the essence of the income-expenditure framework developed earlier, the sources of expenditure, which sum to aggregate demand are:

- Household consumption (C)
- Private Investment (I)
- Government spending (G)
- Export revenue (X)

The income payments to resource owners involved in the production of output generated by these spending flows can be used in the following ways:

- Household consumption (C)
- Household saving (S)
- Taxation payments (T)
- Import spending (M)

Clearly, the sources of income have to equal the uses (as a convention of the National Accounts). As we learned in Chapter 6 in sectoral accounting, this allows us to write the two sides of income generation like this:

$$(18.2) \quad C + I + G + X = C + S + T + M$$

Given C cancels out we know that:

$$(18.3) \quad I + G + X = S + T + M$$

The left-hand side (I + G + X) are called injections – because they inject new demand into the economy whereas the right-hand side (S + T + M) are leakages because they drain aggregate demand.

The left-hand side of this equation is always brought into equality with the right-hand side via national income adjustments (that is, variations in the level of aggregate activity brought about by spending variations).

The way national income adjustments impact on the injections and leakages in the income-expenditure system is one of the first principles of macroeconomics.

So if for example, Private Investment increases (with G and X constant), aggregate demand rises and firms react by increasing output to meet the new orders.

In doing so they will increase employment and pay out more in wages overall. The increased income is then used by workers to consume more, but also to increase saving (S), pay more tax (T) at current tax rates, and increase imports (M).

The economy will stop expanding in response to this stimulus once the change in Investment is equal to the sum of the changes in S, T and M. We identified this dynamic response and subsequent resolution with the expenditure multiplier and the movement to a new expenditure-income equilibrium.

A macroeconomy is thus in a steady-state (that is, at rest or in equilibrium) when the sum of the injections equals the sum of the leakages. Whenever this relationship is disturbed (by a change in the level of injections, however sourced), national income adjusts and brings the income-sensitive spending drains into line with the new level of injections. At that point the system is at rest.

Three points should be reiterated.

First, this position of “rest” does not necessarily and will rarely coincide with full employment. There is no automatic tendency in the capitalist monetary system for the economy to sustain or achieve full employment.

The system will adjust to dramatically lower levels of injections and come to rest even if there are high unemployment levels. We now appreciate that economies can settle at very high levels of unemployment and stay there unless the status is disturbed by a new injection. Typically, if private spending is depressed then that intervention will have to come from a fiscal policy stimulus.

Second, when an economy is “at rest” and there is high unemployment, there must be a spending gap given that mass unemployment is the result of deficient demand.

Accordingly, if there is no dynamic which would lead to an increase in private (or non-government) spending, then the only way the economy will increase its level of activity is if there is increased net government spending.

This means that the increasing government spending ( $G$ ) has to more than offset the increased drain (leakage) coming from taxation revenue ( $T$ ). That is, a budget deficit is needed if there is a non-government spending gap.

Third, this doesn't mean that a budget deficit is always required. In some circumstances, a budget surplus might be the appropriate fiscal stance.

If the non-government decisions taken together (consumption and saving decisions by households, investment decisions by production firms and the outcomes of the external sector) indicate a desire to "net save" which might be written as:

$$(18.4) \quad I + X < S + M$$

then the only way the level of activity can be maintained on an on-going basis (at any rate of unemployment) is if  $G > T$ . That is a budget deficit is required on a continuous basis to sustain a given level of activity.

In this case, a budget deficit "finances" the desire by the non-government sector to save by maintaining sufficient demand to produce a level of income which will generate that level of net saving.

Responsible fiscal policy thus requires the following two conditions to be fulfilled:

1. The discretionary budget position (deficit or surplus) must fill the gap between the savings minus investment minus the gap between exports minus imports.

In notation this is given as:

$$(18.5) \quad (G - T) = (S - I) - (X - M)$$

So, for income to be stable, the budget deficit will equal the excess of saving over investment (which drains domestic demand) minus the excess of exports over imports (which adds to demand).

If the right-hand side of the equation:  $(S - I) - (X - M)$  – is in surplus overall – that is, the non-government sector is saving overall, then the only way the level of national income can remain stable is if the budget deficit offsets that surplus.

A surplus on the right-hand side can arise from  $(S - I) > (X - M)$  (that is, the private domestic sector net saving being more than the net export surplus) or it could be associated with a net exports deficit (draining demand and adding foreign savings) being greater than the private domestic sector deficit (investment greater than saving) which adds to demand.

2. Most importantly, a stable level of national income doesn't necessarily define a state of full employment.

We can define a full employment level of national income as that which is generated when all resources are fully utilised according to the preferences of workers and owners of land and capital etc.

Given that  $S$ ,  $T$  and  $M$  are all positively related to the level of national income, there is a unique level of each of these flows that is defined at full employment. Changes in behaviour (for example, an increased desire to save per dollar earned) will change that "unique" level, but for given behavioural preferences and parameters we can define levels of each.

We denote  $S(Y_f)$ ,  $M(Y_f)$  the corresponding flows that are defined at full employment income ( $Y_f$ ). We also consider investment to be sensitive to national income (this is outlined in the so-called accelerator theory) such that higher levels of output require more capital equipment for a given technology. So  $I(Y_f)$  might be defined as the full employment flow of investment. We consider export spending to be determined by the level of world income.

Accordingly, a full-employment budget deficit condition for stable national income is written as:

$$(18.6) \quad (G - T) = S(Y_f) + M(Y_f) - I(Y_f) - X$$

The sum of the terms  $S(Y_f)$  and  $M(Y_f)$  represent drains on aggregate demand when the economy is at full employment and the sum of the terms  $I(Y_f)$  and  $X$  represents spending injections at full employment.

If the drains outweigh the injections then for national income to remain stable, there **has** to be a budget deficit ( $G - T$ ) sufficient to offset that gap in aggregate demand.

If the budget deficit is not sufficient, then national income will fall and full employment will be lost. If the government tries to expand the budget deficit beyond the full employment limit  $(G - T)(Y_f)$  then nominal spending will outstrip the capacity of the economy to respond by increasing real output, and while income will rise, it will be all due to price effects (that is, inflation would occur).

In this sense, MMT specifies a strict discipline on fiscal policy. If the goal is full employment and price stability then the full-employment budget deficit condition has to be met.

The question then arises: how do employment buffer stocks relate to this condition?

We used the term “loose” full employment in relation to the JG because the employment generated is at minimum wages. The government expands the JG pool by purchasing “off the bottom” of the labour market.

In that context, the automatic stabiliser response associated with the conduct of the JG represents the **minimum** fiscal shift that is required to maintain employment at its previous level in the face of a falling level of private demand.

The maintenance of the **level** of employment, however, is accomplished by increasing the BER. That is, more workers are working on minimum wage and less on market wages when the JG pool expands.

The government may decide that it has non-inflationary room to then expand non-JG employment via direct job creation in the career section of the public sector or by a general fiscal stimulus designed to increase private sector employment.

In this case, the actual deficit spending that will satisfy the full employment budget deficit condition varies according to the proportion of the deficit that is engaged in JG employment.

### **Conclusion**

There are many other microeconomic factors that are relevant to a full understanding of how a Job Guarantee would work in practice. Questions relating to the type of jobs, the levels of government involved in funding and operations, the relationship with the existing income support system, the integration of training pathways into the policy, the role of trade unions, the choices available to workers for fractional employment, the capacity of the government to sack workers and more.

While these are important factors which have been dealt with in the literature, they lie outside of our macroeconomic focus in this textbook. More information can be found in the references at the end of this Chapter.

### Case Study – The British IMF loan in 1976

It was called the 1976 Pound Sterling crisis and it represented a defining moment in the struggle between the existing Keynesian macroeconomic orthodoxy and the emerging Monetarist rival. It has been considered the point at which the paradigm shift in macroeconomic theory and policy-making was consolidated and marked the end of the full employment era that had been maintained since World War II.

To understand what happened in 1976, we have to take a step back in time and trace the evolution of the currency arrangements in the 50 or so years before the British government approached the IMF for a loan.

Prior to World War II, many nations operated monetary arrangements based on the gold standard, where paper money issued by a central bank was backed by gold and the currency's value was expressed in terms of a specified unit of gold. At the heart of the gold standard was currency convertibility, whereby a person could swap paper currency for the relevant amount of gold on demand.

By fixing the value of currencies in terms of a fixed amount of gold, the system thus defined all exchange rates. So, if for example, the Australian Pound was worth 15 grains of gold and the US Dollar was worth 30 grains of gold, then each US Dollar could buy 2 Australian Pounds in trading exchanges.

The monetary authority agreed to maintain the “mint price” of gold fixed by standing ready to buy or sell gold to meet any supply or demand imbalance. Further, the central bank (or equivalent in those days) had to maintain stores of gold sufficient to back the circulating currency at the agreed convertibility rate.

Gold was also considered to be the principle method of making international payments. Accordingly, when imbalances in trade between nations arose, gold had to be transferred between nations to fund these imbalances at the agreed parities. For surplus nations in receipt of gold, their money supply would rise because they now had more gold backing.

The rising money supply would push aggregate demand up against the inflation barrier (given no increase in the real capacity of the economy) which would ultimately render exports less attractive to foreigners and the external deficit would decline.

The loss of gold reserves to surplus nations forced the governments of the trade deficit nations to withdraw paper currency, which led to rising unemployment and falling output and prices. The falling prices improved the nation's competitiveness, which also helped resolve the trade imbalance.

The proponents of the gold standard argued that the monetary constraints prevented the government from issuing paper currency as a means of stimulating their economies and this discipline led to price levels in different trading countries, which were consistent with trade balance.

The problem was that the price adjustments required to resolve the trade imbalances were slow to work and in the meantime, deficit nations had to endure long domestic recessions and entrenched unemployment. The governments in the deficit nations were unable to pursue domestic policies that might deliver sustained full employment.

The onset of World War I interrupted the operation of the gold standard and currencies fluctuated at will. Once war ended, there was considerable instability in exchange rates and attempts by some nations to return to the gold standard proved very costly in terms of gold losses and rising unemployment.

This was particularly the result of the creditor nations demanding unrealistic war reparations be paid, which crippled the debtor nations. Countries tried to devalue to restore growth but this led to a competing set of such parity changes – the so-called “Beggar Thy Neighbour” policy period, where one nation could only improve its standing by undermining that of others.

The net result was a severely disrupted international trade system that ultimately contributed to the onset of the collapse of the financial system in the early 1930s and the Great Depression.

The UK, which had been on the gold standard since 1844 with interruptions for war, finally abandoned the gold standard in 1931 as it was facing massive gold losses during the Great Depression. It had tried to maintain the value of the Pound in terms the pre-World War I parity with gold, but the war severely weakened its economy and so the Pound was massively over-valued in this period and trade competitiveness undermined as a consequence.

World War II effectively ended any hope of a return to a pure gold standard. As World War II was in its last days, delegates from 44 Allied nations met in Bretton Woods, a resort in New Hampshire, United States. The conference was called the United Nations Monetary and Financial Conference and ran between July 1-22, 1944.

Here is Keynes between the Soviet and Yugoslavian delegates.



The Bretton Woods agreement, reached on the last day of the Conference, set the rules for the international monetary system which would run from 1945 and 1971.

The system of fixed exchange rates set the prices that currencies would exchange against each other and established two multilateral institutions, the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (later named the World Bank).

The Bretton Woods agreement created the so-called gold exchange standard whereby convertibility to gold was abandoned and replaced by convertibility into the US Dollar, reflecting the dominance of the United States in world trade.

There were two basic principles that governed the new monetary order. First, all currencies were fixed in value against the US and the US government agreed to convert US Dollars held by official holders (which were central banks and the IMF) into gold at \$USD35 per ounce of gold. This provided the nominal anchor for the exchange rate system and certainty among trading nations.

Second, if a nation was in recession and faced an over-valued currency with chronic trade deficits, it could devalue to restore balance of trade. Similarly, a nation faced with inflation and an under-valued currency could revalue its currency to reduce net exports.

Central banks now maintained stocks of US Dollars as reserves, which they would buy and sell to ensure their currencies stayed within plus or minus one percent of the agreed parity.

Nations running trade surpluses were thus able to build up significant US Dollar reserves. Deficit nations, facing downward pressure on their exchange rates had to sell US Dollars and buy their own currencies on foreign exchange markets to maintain the parity.

When a central bank was forced to buy its' own currency and sell US Dollars to defend the agreed exchange rate, the reduction in the domestic money supply would cause the domestic economy to contract and unemployment to rise.

While central banks could sell gold to the United States treasury at the convertible price to build reserves, this capacity was clearly limited by its gold reserves.

Ultimately, a nation with chronic trade deficits would exhaust their US Dollar reserves and be forced to adopt harsh contractionary policies to reduce imports and stimulate exports via the deflation.

Further, the stock of \$USD reserves held by any particular bank was finite and so countries with weak trading positions were always subject to a recessionary bias in order to defend the agreed exchange parities.

Just like the pure gold standard, the Bretton Woods system was politically difficult to maintain because of the social instability arising from unemployment.

The capacity of fiscal policy was thus highly restricted under this system because it could not undermine the central bank's responsibility to maintain the currency value.

So if expansionary fiscal policy was used too aggressively to reduce unemployment, it would invoke a monetary contraction to defend the exchange rate as imports rose in response to the rising national income levels.

Ultimately, the primacy of monetary policy ruled because countries were bound by the Bretton Woods agreement to maintain the exchange rate parities.

When a nation faced chronic imbalances they were permitted to revalue or devalue their currencies. These were considered to be once off realignments and generally frowned upon.

As noted above, the Bretton Woods agreement established two new multilateral institutions, which were designed to play separate roles within a global system of exchange rate stability and economic development.

The International Bank for Reconstruction and Development was designed to provide development capital to poor nations.

The definitive historical chronicle of the IMF between 1945 and 1965 is provided by the three-volume hardback publication – The International Monetary Fund, 1945-1965: Twenty Years of International Monetary Cooperation, (IMF 1986).

The Purposes of the IMF are outlined in Article 1 of the – Articles of Agreement of the International Monetary Fund (IMF NDa) – which were adopted at the United Nations Monetary and Financial Conference, Bretton Woods, New Hampshire, July 22, 1944 and became enforced from December 27, 1945.

Article I outlines a number of purposes including “To promote exchange stability, to maintain orderly exchange arrangements among members, and to avoid competitive exchange depreciation” and (Section (v)):

... to give confidence to members by making the general resources of the Fund temporarily available to them under adequate safeguards, thus providing them with opportunity to correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity.

Before the growth of the financial services sector and the massive mobilisation of international capital in the 1970s and beyond, the IMF was a major source of finance for governments seeking funds to support their exchange rates under the Bretton Woods agreement.

During this period, the IMF primarily made advances to industrial countries to provide them with the means to address “short-term trade fluctuations” which threatened their capacity to maintain a stable currency value as per the Bretton Woods agreement (see Lending by the IMF (IMF NDb)).

With the collapse of the Bretton Woods system in 1971, advanced nations have been able to access capital on international capital markets and the target of IMF lending has shifted to “lower- and lower-middle-income countries” including transition nations as the Soviet system collapsed.

Article V (Section 2a) of the IMF Articles of Agreement define the limitations on the IMF's capacity to provide funding assistance:

Except as otherwise provided in this Agreement, transactions on the account of the Fund shall be limited to transactions for the purpose of supplying a member, on the initiative of such member, with special drawing rights or the currencies of other members from the general resources of the Fund, which shall be held in the General Resources Account, in exchange for the currency of the member desiring to make the purchase.

First, assistance is not properly conceived of as being a “loan”. Nations seeking assistance agreed to buy “special drawing rights or the currencies of other members” from the IMF using their own currency.

A Special Drawing Right (SDR) is:

... an international reserve asset, created by the IMF in 1969 to supplement its member countries' official reserves ... The SDR is neither a currency, nor a claim on the IMF. Rather, it is a potential claim on the freely usable currencies of IMF members. Holders of SDRs can obtain these currencies in exchange for their SDRs in two ways: first, through the arrangement of voluntary exchanges between members; and second, by the IMF designating members with strong external positions to purchase SDRs from members with weak external positions. (IMF, 2013a)

Initially, the SDRs were valued in terms of the amount of gold that would exchange under the convertible currency system for one US Dollar. When the Bretton Woods system collapsed, the SDRs lost relevance but were valued in terms of a basket of currencies (Euro, US Dollar, Yen and Pound Sterling).

During the last years of the Bretton Woods system, the SDRs were introduced to help member nations maintain

a stable exchange rate. Each nation needed stocks of official reserves (either foreign currencies or gold) which they could use to buy its own currency in foreign exchange markets at times when there was downward pressure on their exchange rate.

By the late 1960s, the IMF determined that there wasn't enough gold or US Dollars in circulation to allow governments to maintain exchange rate stability as international trade and financial capital flows expanded dramatically.

As a result, the IMF introduced SDRs as a new international reserve currency. The funding arrangements between the IMF and the member-states were thus exchanges of currencies rather than loans in the normal meaning of the term.

Second, the nation has to agree to repurchase its own currency back under the terms of funding agreement.

Third, the IMF is deemed a passive player. The member-nation seeking assistance had to approach the IMF and make a case for the funding.

Article III Quotas and Subscriptions of the IMF Articles of Agreement define the funding responsibilities of the member states to the IMF and the extent to which they can draw on the IMF for financial assistance.

A system of Quotas was established and defined how much each nation would have to contribute. These quotas were adjusted from time to time.

The agreed quotas were specified in Schedule A of the Articles of Agreement and are reproduced in the following Table.

DRAFT

**Table 18.1 IMF Quotas**

Quotas			
(In millions of United States Dollars)			
Australia	200	India	400
Belgium	225	Iran	25
Bolivia	10	Iraq	8
Brazil	150	Liberia	0.5
Canada	300	Luxembourg	10
Chile	50	Mexico	90
China	550	Netherlands	275
Columbia	50	New Zealand	50
Costa Rica	5	Nicaragua	2
Cuba	50	Norway	50
Czechoslovakia	125	Panama	0.5
Denmark*	*	Paraguay	2
Dominican Republic	5	Peru	25
Ecuador	5	Philippine Commonwealth	15
Egypt	45	Poland	125
El Salvador	2.5	Union of South Africa	100
Ethiopia	6	Union of Soviet Socialist Republics	1200
Greece	40	United Kingdom	1300
Guatemala	5	United States	2750
Haiti	5	Uruguay	15
Honduras	2.5	Venezuela	15
Iceland	1	Yugoslavia	60

\* The quota of Denmark shall be determined by the Fund after the Danish Government has declared its readiness to sign this Agreement but before signature takes place.

Within a given year, each nation could draw up to 25 per cent of its quota and there was a cumulative limit of 100 per cent of the quota. This limit has changed over time.

The IMF thus agreed to fund current account deficits for a time, but only within limits that were designed to reflect a nation's capacity to repay the reserves advanced.

The IMF also progressively imposed so-called "conditionality" on the use of drawings by member-states. Prior to the 1970s, the conditionality was designed to correct chronic balance of payments disequilibria. Since that time, the conditionality has reflected a much more explicit ideological perspective, which eschews government regulations, public enterprise and broad-based public social welfare provision.

The conditionality was scaled by four so-called credit tranches each defined in terms of the quota. The first credit tranche, which was equivalent to 25 per cent of the member-nation's quota, were relatively unconditional. The next three "upper" credit tranches were subjected to increasingly stringent assessments and conditionality.

While there are many different funding programs that the IMF has offered by way of assistance, and these have

evolved over time, the so-called – Stand-By Arrangements (SBA) (IMF 2013b) – which were established in June 1952, have been the IMF's main funding instrument for nations that call upon it for assistance.

The SBA advance funds at rates that are typically “lower than what countries would pay to raise financing from private markets” and usually are in operation for periods of 12-24 months. They are intended to address short-term balance of payments issues.

The IMF would require these governments to demonstrate that their economic policy stances were consistent with a stable currency. This typically translated into a policy of domestic deflation for a country with an external deficit.

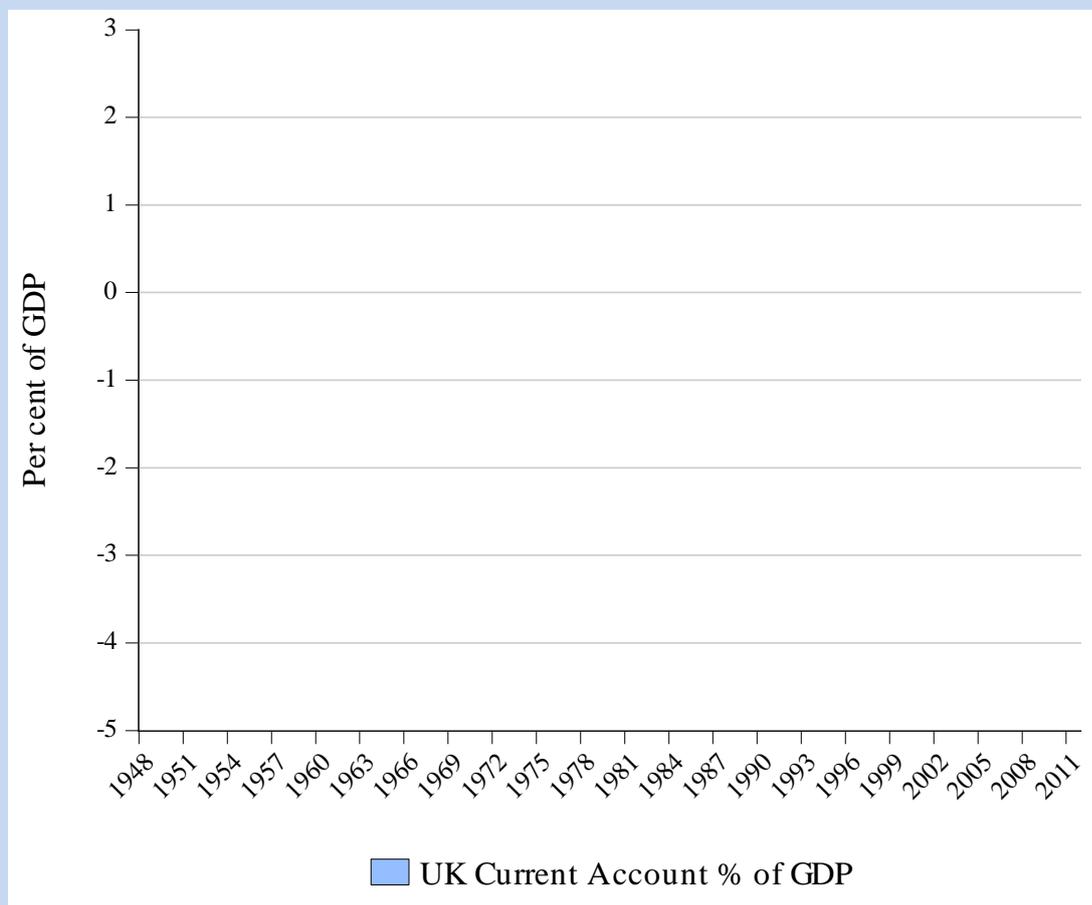
The 1976 request by the British government for an IMF Standby-Arrangement has been constructed as a recognition by a desperate government that it had to tailor domestic policies to meet the constraints imposed on it by international capital markets.

However, the reality is that the British government had drawn on such arrangements several times in the preceding two decades. Prior to the increased focus on conditionality, Britain borrowed in both 1948 and 1949.

The British government had previously sought access to the arrangements in 1956, 1961, 1962, 1967 (associated with the subsequent devaluation) and 1974-75.

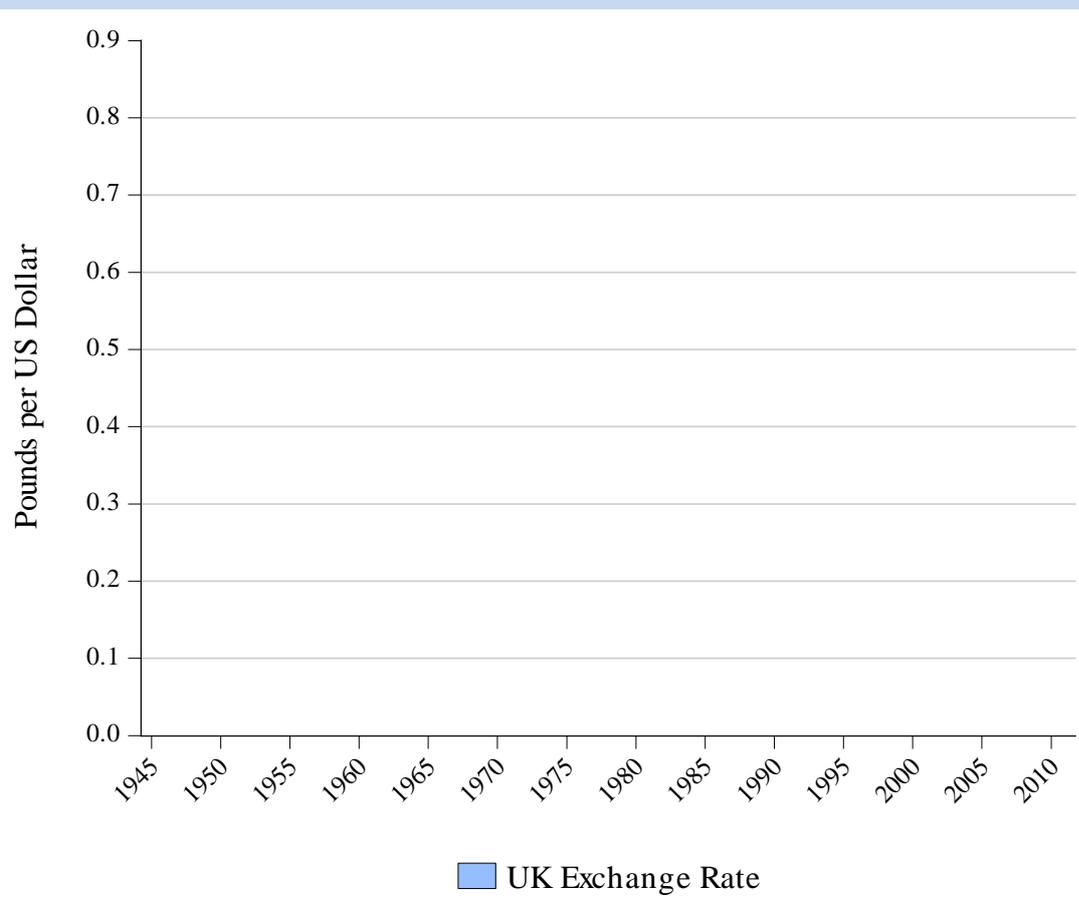
Figure 18.4 shows the Current Account balance as a per cent of GDP for Britain from 1948 to 2012.

**Figure 18.4 UK Current Account % of GDP**



Source: UK Office for National Statistics – Balance of Payments Dataset.

Figure 18.5 shows the evolution of the Sterling exchange rate against the US Dollar from 1945 to 2011.

**Figure 18.5 UK Exchange Rate, 1945-2011**

Source: Lawrence H. Officer, "Exchange Rates Between the United States Dollar and Forty-one Currencies," MeasuringWorth, 2013, <http://www.measuringworth.com/exchangeglobal/>

### Post War Period to The 1976 Crisis

Soon after the Bretton Woods system was introduced there were major failures in agricultural harvests in Europe (and hence exports) as a result of adverse weather.

Many European nations were particularly vulnerable to these fluctuations, not the least because their external reserve position (holdings of gold and currency reserves) was fragile in the face of Balance of Payments deficits.

The Marshall aid plan which began in 1948 partially helped European nations to fund their balance of payments deficits while still engaging in the reconstruction effort.

But the reserve losses were still substantial during this period. The Bank of England, for example, started 1946 with 2,696 million Dollars worth of gold and Dollar reserves and by 1949 this had dropped to 1,668 million Dollars. The United Kingdom endured large reserve losses in 1947 but drew on the "Anglo-American loan".

As recognition for the losses Britain endured prosecuting the war effort and the late entry of the North American nations into that conflict, Keynes had negotiated the Anglo-American loan whereby the US and Canadian governments provided a low cost loan to Britain (from 1946), which allowed the British government to maintain its financial commitments to the Sterling-area nations (principally the Commonwealth countries) without having to cut back infrastructure renewal in Britain.

The loan arrangement also required the British government to provide Sterling convertibility into Dollars and many nations that held Sterling as reserves sought to exchange them for US Dollars thereby worsening the loss of reserves arising from the external deficits.

Britain also received aid under the Marshall Plan which helped offset the assistance that Britain was providing to the Commonwealth nations and had the effect of allowing these nations to increase government spending on infrastructure development "beyond what would otherwise have been possible" (BIS, 1950, page 29).

Convertibility under the Anglo-American loan was abandoned in 1947 as the reserve crisis increased. Britain responded by introducing contractionary domestic policy.

The crisis came to a head in early 1949 as a result of a US recession, which significantly reduced the demand for US imports from Europe (particularly food and raw materials).

As a result of the deteriorating trade balance (less exports), British gold and Dollar reserves fell to \$570 million between April and June 1949.

To avoid a complete loss of reserves, the pound was devalued on September 18, 1949 by 30.5 per cent, which led to similar devaluations in the non-Dollar currencies in Europe and the Sterling-area.

The 1949 devaluation was in response to the shortage of reserves and to some extent reflected the teething problems – that is, getting the parties right – in the newly created Bretton Woods system.

Soon after the US recession ended and British reserves recovered somewhat due to the dual impacts of increased competitiveness arising from the devaluation and the short-lived nature of the US economic downturn.

Throughout this period, Britain was running large Sterling surpluses within the Sterling-area but large dollar deficits overall.

It funded the deficits in several ways: drawing on its gold and dollar reserves; drawing on the Anglo-American loan; drawing on the Canadian loan, and in 1947, 1948 and 1949 the Sterling-area countries borrowed from the IMF. A once-off gold loan from South Africa and the ERP aid also helped.

The drawings mentioned actually allowed Britain to increase its gold and dollar holdings in 1947, 1948 and 1949.

At this stage, the IMF had not yet introduced conditionality into the drawing arrangements. By the mid-1950s, conditionality was increasingly used to steer nations who were relying on IMF funding support to pursue domestic economic policy that the IMF felt would reduce the nation's reliance on future support from the Fund. The principal emphasis was on so-called Domestic Credit Expansion (DCE) targets.

The imposition of conditionality was extended in the 1960s to most advanced nations who sought stand-by arrangements with the IMF.

The British economy grew relatively strongly in the early 1950s and produced external surpluses on the back of robust export growth. The growth in tax revenue also pushed the budget into surplus.

However, import growth was trending upwards and the Bank of England tightened monetary policy in 1955 in order to moderate domestic demand.

The Suez Crisis in 1956, whereby British and French troops intervened militarily in a tripartite agreement with Israel, after Egypt sought to nationalise the Suez Canal, provided some challenges for Britain, beyond the military considerations.

While it did not interrupt trade as much as might have been expected given the strategic importance of the canal – Britain's current account surplus continued in 1956 and 1957, the crisis created a lack of confidence in the value of Sterling and a speculative outflow of Sterling.

The growing lack of confidence in the Sterling (with rising domestic inflation) depleted Britain's US dollar reserves and forced Britain to draw \$US561 million from the IMF in 1956 with an additional stand-by negotiated worth up to \$US739 million. This represented 100 per cent of Britain's IMF quota and was four times larger than any previous IMF drawing by any nation.

These stand-by arrangements have an historic importance because they represented a change in direction for the IMF, whose main role up until that point had been to provide financial assistance from temporary balance of payments imbalances arising from international trade in goods and services.

Boughton (2000: 4) argued that prior to the Suez conflict, drawings under stand-by arrangements was small and largely limited to either "gold-tranche drawing" or drawings on the "first credit tranche (i.e., countries were borrowing no more than 25 per cent of their quota)". He also noted that at the time, the IMF was not constituted to lend to fund shortages arising from speculative outflows of capital.

But the 1956 financial assistance to Britain was the first time that the IMF had extended standby arrangements to help a nation quell a speculative attack on its currency.

The British government was adamant that it didn't want to devalue because it wanted to avoid adding to the domestic inflationary pressures and it wanted to preserve the position of the Sterling as the second reserve

currency and the dominant currency in the Sterling area.

While it was running a surplus on the current account, this was offset by its external investments and debt repayments on the capital account. As a result, the speculative withdrawals of Sterling meant Britain quickly lost reserves.

Boughton noted (2000: 13) that with only a “small cushion of liquid dollar-denominated claims” held by the Bank of England, the markets started to dump Sterling holdings, which put the \$US2.80 Sterling parity at risk. It was in this context, that the Bank of England and the British Treasury determined to fund the defence of the parity via an IMF stand-by arrangement.

Of importance, and this has bearing on what happened in 1976, Boughton (2000: 18) concluded that the request for assistance was “political rather than economic” given that the current account was in surplus, domestic economic policies were appropriate, and the currency was basically stable. Britain could have devalued to head off the financial crisis but did not want the political stigma they perceived would come with that option.

However, Britain did increasingly tighten domestic policy as a way of increasing the external surplus and reducing domestic inflation.

Under US pressure to resolve the Suez crisis, the only condition the IMF imposed with respect to the stand-by arrangement was a British withdrawal from the Suez conflict.

The IMF overcame its apparent problem of not being able to lend to help defend a currency against speculative attacks, by arguing that the assistance was to support Britain’s move to full convertibility (see later) as part of the policy of making international trade and payments freer.

The desire by the IMF for full convertibility was strong in the context of the development of the international trade and payments system after World War 2.

Article VIII, Section 2(a) of the IMF Articles of Agreement states that “no member shall, without the approval of the Fund, impose restrictions on the making of payments and transfers for current international transactions”. In other words, any resident should be able to purchase other currencies at the official parity in order to purchase foreign goods and services, which are recorded in the Current Account of the Balance of Payments.

This freedom is referred to as current account convertibility. After World War II, the participating Bretton Woods nations, progressively relaxed restrictions on imports and currency transactions. However, the war had destroyed a large proportion of Europe’s productivity activity and most nations had few foreign currency reserves. In that context, trade and the related payments arrangements were predominantly bi-lateral.

That is, nations would try to run trade balances against each of their trading partners so as not to run down their foreign currency and gold reserves. In 1950, the European Payments Union (EPU) was formed to allow nations within Europe to trade more freely with each other by coordinating the settlement in gold and US Dollars for each of member nations. This provided a wider convertibility of currencies within Europe and made it easier for nations to engage in multilateral trade arrangements.

However, the foreign exchange transactions were still conducted in segmented markets. First, each European currency traded against the US and Canadian Dollars in one market. Second, the European currencies traded against themselves in another market. There were arbitrage arrangements provided for by the EPU.

At the end of 1958, full convertibility was achieved, which meant that all currencies were to be freely traded against each other and against the North American currencies in a unified market. All nations agreed to buying and selling rates for the US dollar with limited variation permitted.

By the late 1950s, British growth had fluctuated but was still relatively robust (averaging 2.4 per cent). The problem was that growth became a stop-go affair as the balance of payments imposed a persistent constraint on the capacity of the economy to expand and maintain its exchange rate parity.

Britain saw its only solution was to expand exports and this led to its desire to join the Common Market, established by the Treaty of Rome in 1957. However, this introduced another challenge which would also be significant in 1976. Entering the Common Market would be beneficial from an exports perspective if the economy’s competitiveness improved and this required constraining the persistent wage-price spiral.

The other major development in trade was the signing of the 1960 General Agreement of Trade and Tariffs which required the signatories, including the United Kingdom, to reduce tariffs by around 20 per cent across a broad array of products.

Entrenched inflation was undermining Britain’s competitiveness and the weakening external position was continuing to deplete Britain’s external reserves. As a result, by the early 1960s, domestic economic policy was

contractionary, but only partially successful in reducing the current account deficit.

As a result, there was increasing speculative pressure on the Sterling and the Bank of England tightened credit to further slow the economy down. In fact, the two reserve currency nations – the US and Britain – were encountering persistent external deficits which was leading to unsustainable net capital outflow in their respective currencies.

There was also recognition that most of Europe needed to reduce their trade surpluses and increase net capital outflow to resolve the imbalance in the international trade and payments system.

The role of the IMF expanded during this period and they negotiated an agreement among the ten large industrial nations to provide a massive boost to the supplementary resources held by the IMF, which was to provide the Fund with more capacity to assist national currencies who were under speculative attack.

By mid 1961, Britain had to take urgent account to stop the drain on its foreign reserves, including increases in excise taxes, a credit squeeze (higher interest rates), fiscal austerity, a concerted policy of wage restraint, and a massive stand-by arrangement drawing from the IMF amounting to US\$1,046 million.

The restraint led to falling real GDP growth and rising unemployment. By the end of 1961 the fall in imports and rise in exports reduced the deficit significantly and Britain's gold and dollar reserves rose substantially.

The wage restraint manifested in the form of an incomes policy (wage pause), which both unions and employers accepted. However, there was no fundamental change in the bargaining relationships and so the incomes policy was only a temporary solution.

The wages debate was another important issue which resonated into the 1970s. Through the 1950s, wage bargaining in the UK had increasingly been dominated by unions and peak industry bodies exerting their respective market power to defend (and expand) their respective shares in real national income.

The unions pushed for real wages growth that at times exceeded the growth in productivity and capital pushed for increases in real profit margins at the expense of the workers real wages. Each group used their individual price setting strength (unions to push for higher money wages and firms to raise prices) to react to a claim by the other for a higher real share.

The result was a creeping inflation problem and rising costs which undermined Britain's trade position. By the end of the 1950s, Britain was finding its dominant trade strength had waned significantly.

While much of the focus was on the so-called abuses of trade union power, there was also a noted lethargy on behalf of British industry to invest in latest technology and drive labour productivity higher.

The United Kingdom's balance of payments situation was becoming more influenced by monetary movements than by its current account (trade position) which exacerbated the sensitivity of the currency parity to economic growth and meant the stop-go nature of economic development was accentuated.

In 1964, the continuing themes of persistent domestic inflation, a current account deficit and loss of confidence in the currency, were dominant policy issues and the Government responded in 1965 with some limited austerity measures but overall unemployment fell and the budget deficit widened.

Wages growth kept domestic demand strong and to formalise the government's desire for wage restraint, they introduced the National Board for Prices and Incomes in 1966 to produce and enforce wage guidelines.

Throughout this period, the British economy was struggling with the seemingly incompatible goals of maintaining strong domestic growth with rising living standards and managing its external payments situation. Of-course, the reason for that incompatibility was the rigid view that the British authorities had with respect to maintaining the Sterling parity.

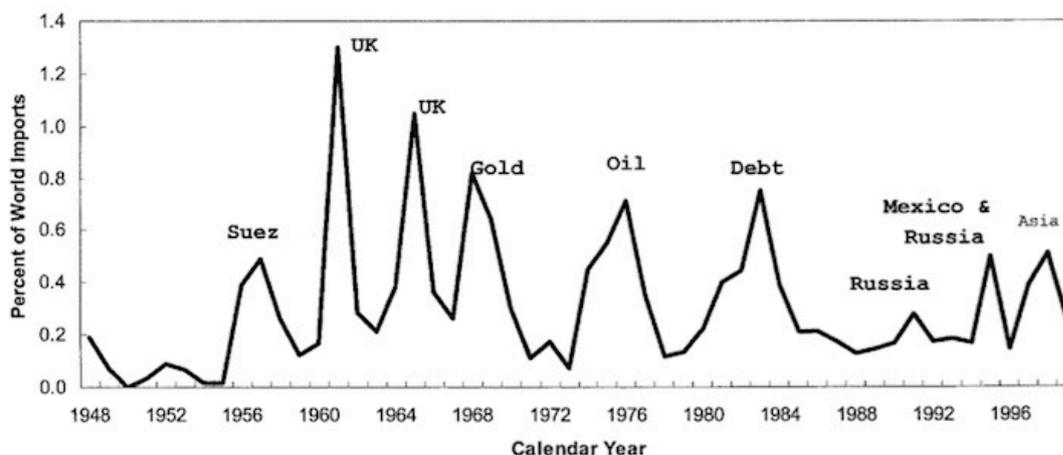
But the current account was in deficit through 1964 and 1965 with a drain on reserves leading to another drawing from the IMF in May 1965 of \$US1,400 million, the second largest to that date and the Fund's Sterling holdings were equal to 198 per cent of Britain's quota.

The restoration of reserves, combined with the tightening of domestic policy, saw the trade position move into a small surplus by the end of 1965.

Both Britain and the US, introduced various constraints on international monetary movements in 1965 to reduce the net outflows of their currency, an increasing source of weakness.

The following graph is taken from Boughton (2000: Figure 2, Page 23) and shows the IMF financial assistance to member-states between 1948 and 1999. The two major UK drawings in 1961 and 1965 feature prominently.

Figure 2. IMF Lending, 1948-1999



### The November 1967 Devaluation

1967 was a year of world economic crisis – the largest since 1949. Cost pressures were rising and translating into persistent inflation in many nations.

In 1966 and into 1967, Britain ran very large balance of payments deficits and there was a substantial associated loss of reserves and reduced confidence in the Sterling.

Policy contraction including a wage and prices freeze in mid-1966, led to a decline in imports and an improving current account position. There was a slight slowdown overall and unemployment edged up.

The trade surplus renewed confidence in the Sterling.

Further, Sterling was strengthened because interest rates were eased in the US and Europe, encouraging net capital inflows into Britain in search of higher yields.

Britain used the windfall of funds to repay various international debts, including reducing its outstanding IMF liabilities under previous stand-by arrangements.

The calm was short-lived. The first disruption came on June 5, 1967, when the – Six-Day War – between the Arab States (United Arab Republic, Jordan and Syria) and Israel broke out after Israeli military aggression (air strikes into Egypt).

The war impeded British exports, increased the cost of oil and saw a sell-off of Sterling.

Secondly, the US increased interest rates to quell a credit boom and this boosted the value of the Dollar.

Third, Europe entered recession which further damaged UK exports and the current account went into deficit. The loss of export revenue also led to rising British unemployment and plunged Britain into a policy quandary.

The Sterling was under pressure from the increasing external deficit and net capital outflow, which would normally have led to some domestic policy contraction. But with a recession looming, the Government needed to bolster domestic demand. This is a situation that would repeat itself in 1975 and 1976.

The British government opted to avoid the politically costly rise in unemployment and there was a monetary easing combined with some fiscal policy expansion, which pushed the deficit up.

There was considerable debate as to whether the British government was committed to maintaining Sterling stability given these expansionary domestic policy interventions.

Additionally, despite initial wage restraint in 1967 following the completion of the 1965-66 wage freeze, wages growth was rapid in the latter part of 1967 and outstripped productivity growth thereby undermining Britain's international competitiveness.

Further industrial unrest on the wharves in the latter part of 1967 constrained Britain's exports and the current account deficit rose.

The British government had to face the reality that to defend the mounting pressure on the Sterling it would have to invoke a harsh recession and drive unemployment up significantly. The stop-go growth pattern had come firmly up against the political constraints.

It also knew that earlier efforts in the 1960s to deal with a weak balance of payments situation had resulted in lost national income, but didn't really solve the underlying problem.

The problem became rather obvious – the exchange rate was overvalued and try as they might to preserve that value for reasons of national prestige, the reality was that it had to be devalued.

On November 18, 1967 the British government devalued the Sterling by 14.3 per cent against the US Dollar.

The 14.3 per cent devaluation in November 1967 saw the Sterling shift from \$US2.80 to \$US2.40 and the Government thought it would result in a major shift in the composition of aggregate demand – away from imports in favour import-competing products and provide a stimulus to exports.

At the time, the economy was growing strongly and had little excess capacity and consumer spending was robust as the wage restraint imposed earlier in 1967 was relaxed.

The external deficit was also rising sharply and speculators considered the Sterling would have to be further devalued, and the resulting selling down of the Pound led to a further drain on Britain's reserves.

The Government had to fund the external deficits to ensure the new parity could be sustained. They tapped large support from foreign central banks (including the Bank of International Settlements), which allowed Britain to repay prior IMF drawings and defend the new Sterling parity.

Further, on November 29, 1967, Britain signed a stand-by arrangement with the IMF worth \$US1.4 billion. The 1967 arrangement was unique in several ways.

Through the 1960s, the IMF increasingly imposed quantitative conditions on nations seeking stand-by arrangements. These conditions were controversial because they were bordering on political interference on the rights of a nation to determine its fiscal policy settings. The IMF was not an elected body nor was it accountable to the voters in countries that the stand-by arrangement were extended to.

However, after vigorous debate, the UK government secured the large 1967 stand-by arrangement without any qualitative conditions being imposed. This was considered a slight on developing nations, which typically had to succumb to such restrictions. Further, the UK government requested a single payment rather than receiving the funds in instalments, which was the typical arrangement imposed on poorer nations.

After the devaluation, imports continued to rise and despite the sharp increase in exports, the overall balance of payments deficit continued to place pressure on the currency.

To limit the increase in aggregate demand while still enjoying the improvement in its external position, the Government introduced contractionary fiscal and monetary policy changes to accompany the devaluation. The fear was that the change in parity would increase inflation and undermine the competitive gains flowing from the devaluation.

The literature shows that the relationship between the IMF and Britain in this period could not be reasonably characterised as the former imposing its will on the latter. Even though the British government was often in disagreement with the IMF in terms of negotiating the stand-by arrangements, it is clear that the austerity that followed the stand-by arrangements being agreed to were a reflection of the political will within the Government rather than the IMF using its financial clout to pursue ideological motives.

In its' Budget in May 1968, the British government further tightened its policy settings in an attempt to restrict income growth and restrain import spending.

On June 19, 1968, Britain drew on the November 1967 stand-by arrangement with the IMF.

The domestic policy restraint imposed in 1968 saw some improvement in the external position by year's end and domestic policy was further tightened in late 1968 and again in early 1969. Credit was restricted and taxes were raised.

To shore up the loss of reserves, the UK government secured a further stand-by arrangement with the IMF on June 20, 1969 of \$US1 billion. There were two quantitative conditions imposed as part of this stand-by arrangement. First, that the Government would achieve a balance of payments surplus by early 1970. Second, that domestic credit growth would be required to stay within agreed upper limits.

By late 1969, an external surplus was achieved, mostly because external conditions were favourable to a substantial growth in exports. The devaluation also had improved Britain's competitiveness, which enhanced the

economy's capacity to exploit the buoyant world trade situation.

The domestic restraint saw a significant slowdown in domestic spending and there was a substantial inflow of reserves as confidence in the Sterling increased in 1969. The improved external position allowed Britain to repay significant amounts of its external debt liabilities.

However, inflation was still persisting at 5 per cent and this created mounting wage pressures as workers sought to defend their real standard of living.

The Government's position was clear. It wanted the nominal devaluation in 1967 to "stick" in real terms, which meant that wages could not be compensated for the higher import prices. The trade unions opposed this, and in 1968 and 1969 were able to gain nominal wage increases consistent with the underlying inflation rate.

The incomes policy guidelines imposed by Government were not capable of restricting the nominal wages growth and industrial unrest was relatively high as workers sought to improve their real living standards.

This tension would feature throughout the 1970s, which became more complicated with the collapse of the Bretton Woods system in 1971.

### **The Demise of The Bretton Woods System**

The Bretton Woods system finally collapsed in August 15, 1971, when the US government curtailed convertibility in the wake of on-going external deficits which precipitated unsustainable gold losses.

The Group of Ten nations responded by agreeing to a new system of pegged exchange rates. The initial decision was to devalue the US Dollar and increasing the band around which exchange rates could fluctuate. There was no taste at that time for a freely floating system of currencies.

Interestingly, the die was cast with the large devaluations in 1949 of the Sterling and other European currencies against the US Dollar. Prior to that, the US economy had run large external surpluses, not the least because its productive system was undamaged by the Second World War.

After 1949, occasional US external surpluses were accompanied by more regular external deficits mainly due to net outflows of capital. The US became a major source of private direct investment, mostly to Canada and Latin America.

The US was faced with rising current account surpluses being offset by greater capital account deficits.

The result was that the US progressively lost reserves. The rest of the world looked on this favourably as the net outflow of US funds provided nations with US Dollar reserves.

The trade surplus started to shrink in the latter part of the 1960s, largely due to a rise in import spending, which compounded the situation.

The rapid increase in domestic spending as a result of the military spending associated with the Vietnam War, saw the excess capacity, which had persisted throughout the earlier part of 1960s, quickly absorbed. The unemployment rate fell to record lows in the second-half of the 1960s.

Rising inflation also resulted from the strong domestic economic conditions and this eroded the external competitiveness of the US (particularly against Japan) and the trade surplus narrowed as imports boomed and export growth moderated.

The competitive position of the US had been deteriorating throughout the 1960s as a result of the combination of devaluations among its trading partners and the rising domestic inflation made matters worse.

The US government responded with rising interest rates in 1969 and by 1970, the US was in recession.

It is worth noting that through the 1960s, the US shifted from being a net exporter to a net importer of consumer goods. At the same time, it funded this shift by being a net exporter of capital goods. Its position as a net exporter of capital goods deteriorated in the late 1960s, which also accounts for its worsening balance of payments situation.

This was in the face of growing productivity in other advanced nations, which enjoyed strong income growth with significantly lower wages growth.

However, the on-going loss of reserves and the associated gold losses (as nations sought to convert their US Dollar holdings into gold under convertibility) were unsustainable.

The US government was under the same sort of political pressures that all external deficit nations faced. To

reduce imports it would have to adopt deflationary fiscal and monetary policies, which drove up unemployment and undermined the popularity of the government in question.

Further, given the fact that the US Dollar was at the heart of the Bretton Woods system, the US government was under massive pressure to maintain the official exchange parity of the Dollar as a sign that the international monetary system was stable.

This meant that the US government had limited policy room in which to move to reduce the persistent external deficits. The main target became controls on private capital outflow, mostly of a voluntary nature.

It became increasingly clear that the US Dollar was overvalued through the 1960s. The persistent external deficits and the rapid build up of reserves by Japan as a result of its strong surpluses was indicative. The rather large decline in the US trade surplus in 1968 provided a clue to this assessment.

By 1971, the persistent US external deficits and other problems in the international monetary system, reached the crisis point.

In fact, the Bretton Wood system had been under strain through the 1960s. With the growth in world trade throughout the 1960s, the system required a commensurate growth in reserves to defend the agreed fixed parities and a growth in IMF resources, given its support role to nations with temporary external imbalances.

Further, the growth in reserves had to be proportionality split between gold and US Dollars, given the convertibility arrangements. Participating nations had to have certainty that they could always convert their US Dollar holdings into gold on demand.

With growing US deficits, the rapid growth in US Dollars in the world reserves and a shortage of new gold started to stretch the system as early as 1960. Throughout the 1960s, the US was losing gold as it maintained convertibility in the face of a slower growth in overall world gold production.

An important issue, that has relevance even today in the Eurozone crisis, is that major trade imbalances developed in the 1950s and 1960s. In the Bretton Woods system and in the context of the international payments system, the sum of the balance of payment deficits has to be equal to the sum of the surpluses, once the injection of new gold (and after 1969, the creation of IMF SDRs) were netted out.

Clearly, an injection of new gold allowed the payments system to be in net surplus without an equal and offsetting deficit somewhere else in the system.

The dominance of the US Dollar in that system meant that other nations had to run net surpluses to equal the US external deficit. These imbalances pushed the burden of adjustment onto the deficit nations, especially if the currency was overvalued. These adjustments came in the form of a loss of foreign reserves, a reduction in capacity to borrow in international capital markets, and harsh domestic policies aimed at reducing imports via the creation of unemployment.

Nations with undervalued currencies running persistent large surpluses (the mirror of the deficits) had no particular pressure on them to engage in domestic adjustment. Their citizens might have been aggrieved that their own standard of living could have been higher if the surpluses were not so large because they could either have greater use of their own resources, or more imported goods and services in exchange for exporting their real resources.

But that political pressure was minimal compared to the problems a government faced when it cut spending, raised taxes and created unemployment.

During the 1950s, for example, Germany ran huge balance of payment surpluses, which were, in part, promoted by the devaluation of 1949. The Bank of International Settlements wrote (1972 Annual Report, page 14):

... one may say that the German surplus stands out as enormously large and that either the 1949 devaluation of the Deutsche Mark was a mistake or there should have been a subsequent revaluation as the economy recovered. That no revaluation occurred before 1961 is ... a reflection on the generally rigid attitude towards fixed official parities that prevailed in this period.

You can see the parallels today with the German export surpluses reflecting the external deficits of the Southern European nations and the German unwillingness to expand domestic demand and reward their own population with real wage increases in line with productivity growth. The result is that the burdens of the imbalances are being forced onto the deficit nations because there is no capacity to change the exchange rate between the nations.

The Bretton Woods system was also strained by movements in the gold price. Remember that the system of convertibility depended on the US dDollar being exchanged for gold at a fixed price (\$US35 per fine ounce). In

the early 1960s, the gold price surged in the wake of higher demand from private buyers and central banks.

The price moved above the level that the US Treasury would convert it at, which was an unsustainable situation. The focus was on the gold shortage and the implications of that shortage for an on-going willingness of the US government to maintain convertibility, which was central to maintaining stability in the international payments system.

Earlier, the US government has sold gold into the market to reduce the excess demand and maintain the US Dollar/gold parity. Further, central banks agreed to refrain from adding to gold demand as another way of keeping the market price of gold from separating from the official price.

The coordination of central bank gold trading – where central banks agreed as a group to buy and sell gold in equal amounts as a collective, in order to neutralise the overall impact on the gold price was known as the Gold Pool.

Between 1962 and 1965, the Gold Pool was a net buyer of gold so as to ensure that the gold price was relatively stable and consistent with the official price, taking into account new discoveries (increased supply) and the fact that the USSR was selling large quantities of gold in the market.

After 1965, with the USSR supply ending, the Gold Pool shifted to becoming a net seller of gold to ensure there were adequate supplies to meet the demand.

With the British devaluation in 1967, there was a massive surge in demand for gold as speculators anticipated that the US would also devalue its' Dollar.

The reserves held in the Gold Pool were significantly drained as the surging demand for gold, driven by the diminished confidence in the capacity of the US Dollar to maintain convertibility, led to a dislocation between the market price and official price of gold that could no longer be arrested.

As a result, the Gold Pool suspended its activities because it could no longer tame the gold market. It accepted that the gold price would float and a so-called two-tier gold price was established – the free market price and the official US Dollar price.

This was one of the final developments that led to the demise of the Bretton Woods system.

The more significant point is that all the new gold supplies were being absorbed by buyers for industrial or saving purposes which squeezed the capacity of nations to add gold to their monetary reserves for use in the international payments system. The Gold Pool filled that need for a time, as did the US sales. However, by the end of the 1960s, this capacity was in danger of being exhausted.

The US government engaged in various activities and arrangements (for example, currency swaps with foreign central banks, exchange guarantees, IMF drawings of foreign exchange) to mitigate the loss of gold reserves.

The IMF also created a new reserve asset – the special drawing rights (SDR) in 1969 after several years of discussion and negotiation – to overcome the shortage of gold and the need for the US to reduce its external deficits (and therefore its supply of US Dollars to the market).

SDRs were allocated to each member nation in proportion to each nation's IMF membership quotas. Thus, a nation could draw on its SDR allocation to bolster its international reserves and each participating nation agreed to accept the SDR on an equal basis to the US Dollar and gold.

The solution was short-lived.

In 1970 and 1971, the US ran increasingly large external deficits and the state was set for a major speculative attack on the US Dollar which would end the Bretton Wood system.

Monetary policy settings were also important. In the late 1960s, the US government hiked interest rates in response to the inflationary surge associated with the prosecution of the Vietnam War.

With an increasingly liquid Euro-dollar market available and the widening US-European interest rate differentials, American banks used their foreign branch network to borrow heavily to overcome the credit squeeze. This led to a significant inflow of funds to the US which helped offset the external deficit.

However, the indebtedness of US banks to their foreign subsidiaries began to reverse in 1970 as the US loosened its monetary policy stance and the funds outflow exacerbated the external deficit. European monetary policy was simultaneously tightening and this also motivated the funds outflow.

The resulting capital flows (mostly out of the US into Germany) led to a further strain on US reserves as the US trade surplus was shrinking rapidly (as the lower interest rates were aiding domestic growth).

In early 1971, the situation came to a head. The massive inflow of funds to Germany put upward pressure on the Deutsche Mark and the Bundesbank engaged in large-scale US Dollar purchases.

In the first week of May, the German government suspended the foreign exchange market and was urged to float the Mark by various German economists. The German government did not want to ease monetary policy because they feared that wage pressures would increase the inflation rate.

Several other northern European nations followed suit and suspended their foreign exchange markets.

On May 10, 1971, the German government floated the Mark as did The Netherlands. Other European nations were forced to revalue their parities against the US Dollar to halt the inflow of funds.

But a US trade deficit emerged and widened in the period from April as economic activity picked up and the high interest rates in Europe induced a recession, which reduced import demand from the US.

The developing view in the foreign exchange markets was that the US currency would have to devalue further (given it was lower against the Mark and the Dutch currency after their floats).

In August 1971, that sentiment gathered pace and the US Dollar was widely sold in international markets for foreign currencies, which added substantially to the official US Dollar reserve holdings in many nations.

The subsequent pressure on the US government from various central banks for conversion (via gold or swaps) led to further losses of US reserves.

The situation was unsustainable and on August 15, 1971, the US President suspended convertibility and the Bretton Woods system inevitably collapsed as a result.

### **The First OPEC Crude Oil Price Hike**

The crunch started in mid-October 1973, when the Arab oil-producing nations, in the face of the on-going military conflict in the Middle East, decided to cut crude oil production and increase prices.

The Organisation of Petroleum Export Countries (OPEC) cartel initially increased the crude oil price by 70 per cent. A further price rise of 127 per cent followed soon after (December 1973). In three months the price of crude oil had risen from \$US3.01 per barrel to \$US11.65 per barrel.

The initial worry was that oil would be in short supply given the announced cut backs in production. Nations initially introduced rationing in anticipation. But OPEC reversed that decision and crude oil output was soon back to its September 1973 level, albeit at a much higher export price.

Many nations were highly dependent on imported crude oil with Japan highly exposed. In 1973, around 8 per cent of Britain's imports comprise crude oil, which represented about 1.9 per cent of Gross National Product.

The oil price rise had four initial effects. First, it represented a real loss to each importing nation and more of their national income had to be devoted to purchasing energy. Deflationary effects soon emerged with car sales plunging in many nations.

Second, there was a major substitution away from oil-using technologies (large cars, oil heating etc), which provided domestic investment opportunities. The mid-1970s saw the advent of the small four cylinder car as the norm in most nations as consumers abandoned the larger cars that had been commonplace in the Post War expansion.

Third, the crude oil hikes introduced cost inflation as producers and other firms tried to pass on the higher raw material costs onto consumers and thus avoid squeezing real profits. At the same time, trade unions sought to defend the real wages of their members by seeking higher nominal incomes.

Fourth, the international balance of payments was dramatically altered with oil dependent nations experiencing large increases in the value of imports and, in some cases, nations that typically ran external surpluses were forced into external deficit. The mirror image was that the OPEC nations started to run up very large current account surpluses.

Britain entered the crisis with Z years of balance of payments deficits and had already experienced financing pressures.

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