INFLATION IN JERSEY

Report by Michael Parr commissioned by the Finance and Economics Committee

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- 1. This report examines past and current inflation in Jersey. It has been commissioned after Jersey's reported rate of inflation at the end of 1999 rose significantly above both that of its Channel Island neighbour, Guernsey, and also the UK mainland. Concern was expressed about the causes of this- whether it was simply a matter of differences and/or errors in the measurement of Jersey's inflation rate, or whether a more fundamental set of factors were at work.
- 2. This report covers successively:
 - (i) the definition, measurement, measurement methodology & impact of inflation
 - (ii) theories and causes of inflation
 - (iii) UK government policy towards inflation
 - (iv) the divergence between UK and Jersey rates of inflation
 - (v) an analysis of Jersey inflation: in aggregate
 - (vi) an analysis of Jersey inflation: disaggregated by product and wage groups
 - (vii) conclusions and possible policy actions by the States
- (i) Inflation : definition, measurement, measurement methodology & impact

Definition

- 3. Inflation is a sustained rise in prices throughout the economy as a whole. The general price level rises, not a single price. A single price can rise, and fall, for real factors. Changes in relative prices are normal. Thus, for example, computers have become cheaper relative to other goods over recent decades, whilst the price of star talent, such as top actor or footballer wages, has risen. But with inflation price rises are more general and are sustained. Consequent to the latter feature, inflation is measured per unit time.
- 4. Historically, over centuries, there appear to have been long periods when price levels in the UK economy have been stable (as far as data sources allow such a judgement). On occasions they have fallen, but sustained inflation is a largely modern phenomenon. The post 1945 period has seen major bouts of inflation in the UK, peaking in the mid 1970s with inflation running at over 25% per annum. Such high rates of inflation still occur in some countries 1.
- 5. In measuring changes in the general price level we must be clear which and whose prices we are talking of. As to which prices, an obvious answer is the set of prices faced by consumers. But one can also measure inflation in producer prices, i.e. the prices faced by companies for semi-finished goods and so on. However the most common measure of inflation is that which focuses on prices faced by consumers. But consumers vary a good deal in their consumption of goods, so it is also necessary to specify the set of consumers we are concerned with. The most common interpretation is the average consumer, but special inflation measures can be constructed for any consumer group, if their consumption of products and services is specific and "out of the ordinary", e.g. a special pensioner inflation index is measured in the UK.

At present, for example, Turkey has inflation of 70% per annum, Russia 30%, and Venezuela 20%. In contrast, OECD countries have inflation rates under 3%.

Measurement

- 6. The normal measure of consumer price inflation is the retail price index (RPI). Note it is the actual retail, or shop, prices, including tax, paid by consumers that are measured by this method. It is an index, set at 100 at a particular base time, so changes month on month, quarter on quarter, or year on year can be gauged. The RPI is known as the headline inflation measure, as it is the most widely known and reported.
- 7. The general method for compiling the RPI is to use the concept of an average basket of goods, whereby the typical basket of goods and services bought by the average household is identified. The price of each product in the basket is weighted by its importance, normally in terms of annual expenditure, to give a total basket cost which becomes the index. Putting this idea into practice involves both determining average expenditures on goods and surveying the individual prices of goods in the basket. Both need doing on a regular basis.
- 8. It is also common practice to exclude some households at the top and bottom of the household "ladder", i.e. the rich and the poor, on the basis that their consumption of goods is not typical of the majority and might skew the results.
- Both the UK and Jersey (and Guernsey) use this average basket of goods approach in compiling their own RPIs. There are some differences in methods, which reflect their relative size and resources. Table 1 below summarises the similarities and differences.

Table 1: Comparison of UK and Jersey RPI measurement methodologies

	United Kingdom	Jersey
Frequency of collection and reporting-	monthly	quarterly
product/service groupings-	14	14
individual products in index-	>600	>500
locations in area-	146	n/a
total number of price points taken-	120,000	>2,000
average no. of price points per product-	200	4
weightings based on-	yearly FES	5 yearly survey
current year in use-	1999	1993/4 (1998/99
	introduced Jan 2000	to be incorporated this year 2000)
household exclusions-	top 4% income;	top 3%;
	bottom 14%, pensioner	and the
	households where	bottom 5%,
	75% of income comes	plus all single
	from state benefits	parents under £ 5k income
method of collection-	out house by private co.	in-house

Methodology

- 10. The UK methodology is essentially the same as that of Jersey, except that the sample taken is much larger and more geographically dispersed, simply because the UK is bigger and more diverse. This results in a much higher number of price observations per product surveyed. The UK calculations are also more frequent. The RPI is calculated and reported monthly there, but only quarterly in Jersey. The UK RPI is also calculated using weightings for each product which are only one year in arrears, being based on the latest annual Family Expenditure Survey (FES). Jersey updates its weights about every 5 years. The UK also more extensively "tops and tails" the households to be included in calculating the average household weights. It excludes the top 4% of households and the bottom 14%, where 75% of household income is made up of state benefits. This is largely pensioner households.
- 11. The actual weights used to aggregate the prices of individual products into the RPI are shown below in Table 2, which reports the weights for the 14 main product and service groups (and into which all the individual products and services are put). It can be seen that there is a broad similarity in the consumption patterns of households in the UK, Jersey and Guernsey. However, these expenditure weights do change through time, as consumers alter their consumption (mainly because of preference and price changes). These weights are the proportion of the household budget spent on each group of products.

Table 2: Current weights used in RPI calculations in Jersey, the UK and Guernsey

	Jersey:1993/4	UK: 1999	1993	1987	Guernsey:1998/9	1992/93
Housing	16.8	19.3	16.4	15.7	21.6	20.6
Food	14.1	12.8	14.4	16.7	12.7	16.3
Motoring	9.6	13.9	13.6	12.7	8.5	10.0
Household Good	ls 8.2	7.4	7.9	7.3	7.9	7.0
Leisure services	7.9	6.1	6.2	3.0	9.2	7.5
Clothing & foot	wear 7.0	5.5	5.8	7.4	5.6	6.5
Alcohol	6.6	6.9	7.8	7.6	5.2	3.8
Personal Goods	6.4	4.0	3.9	3.8	4.9	5.8
Leisure Goods	6.2	4.7	4.6	4.7	6.3	5.7
Catering	4.4.	5.1	4.5	4.6	5.5	4.8
Fuel & Light	3.2	3.4	4.6	6.1	4.2	5.7
Fares & Travel	3.2	2.1	2.1	2.2	'3.3	2.6
Household servi	ces 3.1	5.7	4.7	4.4	3.3	2.4
Tobacco	1.7	3.1	3.5	3.8	1.9	1.4
	100	100	100	100	100	100

12. The RPI methodology used by Jersey has been professionally and externally examined by statisticians from the UK's Government Statistical Service (GSS) in 1989 and in 1994. Both reports generally gave approval. This is not to say that this general basket

of goods method of calculating the RPI is without controversy. The 1996 Boskin Commission Report in the US concluded that their Consumer Price Index was overstated by 1.1% per annum ². This has led the UK's own RPI to be called into question. There are a number of problems/areas of debate amongst the statistician community - whether asset prices (such as house prices) should be in the index ³; product quality change and dealing with new goods and services ⁴. The UK GSS currently has a 3 year programme of research into the methodology of the RPI, examining, inter alia, questions of bias. It should be understood that bias may be in either an upward or downward direction in any one component of the methodology and it is not clear, a priori, whether any aggregate systematic bias exists.

- Nevertheless, two methodological issues are immediately apparent from Table 1 in comparing the Jersey and the UK indices;
 - Is the fact that the Jersey weights have not been updated for 6 years a problem?
 - Is there also a problem with the smaller number of price observations taken in Jersey, which leads on average to only 4 price observations per product?
- On the first issue it is difficult to be certain about whether this is leading to any bias in the Jersey RPI calculations. Much depends on the size of weight changes and for which groups they change. Normally one would not expect substantial shifts in weights over a 6 year period. Table 2 shows that that has certainly been the case for the UK and Guernsey. Forecasting how the weights might have changed for Jersey since 1993/4 is very difficult, as consumers in different economies do behave differently. Some changes are quite likely to have taken place, such as a continuing decline in the food weight. This decline in the relative importance of food in the household budget has gone on for several decades. But for other expenditure groups the picture is unclear. The individual weights seem to have moved differently in Guernsey and the UK over the 1990s. In Guernsey the weight attached to motoring has declined, but increased for the UK. This perhaps reflects the small island nature of Guernsey and the limited scope for increased driving mileage. However, in Guernsey the weights attached to alcohol and tobacco have gone up between 1992 and 1998. The reverse is true of the UK mainland. Consequently, it is hard to know whether changes in Jersey household consumption patterns will prove more like Guernsey or more like the UK. Whatever the changes, I would be surprised if substitution of revised Jersey weights (planned for the middle of this year) would result in more than a 0.5% difference in the rate of inflation as measured by the Jersey RPI. This might be either up or down.
- 15. On the second issue there appears more of a problem. This problem has been periodically highlighted by some leading members of Jersey's retail sector, particularly with regard to the food sector, where the point is made that it is difficult to understand

See R J Gordon, The Boskin Commission Report and its Aftermath, Paper presented to the Eurostat Conference on the Measurement of Inflation, August/September 1999.

I put the methodology of how housing costs are calculated to one side here. For a good general introduction to the RPI see, C Johnson, S Briscoe, Measuring the Economy: A Guide to Understanding Official Statistics (Penguin, 2/e, 1995), Chapter 5 - Inflation.

See M Baxter, Implications of the US Boskin report for the UK Retail Prices Index, *Economic Trends*, October 1997, p.56-62.

why Jersey food prices show a rate of inflation above that in Guernsey and the UK. Shopping basket comparisons taken for internal use by one leading food retailer in the Island (and based on one observation of a far smaller number of products) show no such divergence.

- 16. The data points taken in the Jersey sample are relatively few per product on average. The data collected at each price point are then geometrically averaged. Although a small number of observations can result in erratic movements in the average, it is not clear whether it can also lead to bias in the index itself. I am advised by the P&R Statistical Unit that this aspect will be carefully reviewed later this year when UK GSS experts have agreed to review the Jersey RPI methodology.
- However, overall, and this latter point to one side, I see no obvious general
 methodological weakness and hereafter accept the RPI numbers as calculated by the
 Statistical Unit.
- 18. There is one other measure of headline inflation, other than the RPI, which is now routinely reported in the UK. This is the harmonised index of consumer prices (HICP). This is an index created by Eurostat, the statistical agency for the European Union (EU). The HICP started in 1996 and enables direct standardised comparisons to be made in inflation rates across all EU member States. The HICP is now increasingly important as it is used to construct the inflation index for the economic and monetary union (EMU) area. It is what the European Central Bank (ECB) focuses on (see later). The Statistical Unit intends to begin this year an HICP index for Jersey, alongside the RPI.
- 19. There are several variations on the RPI and the HICP which try to measure underlying or core inflation. The notion of underlying inflation tries to abstract from price changes that are subject to very particular factors or shocks, which distort the headline index and do not capture the "real" general rate of inflation in goods and services. In the UK two measures are routinely reported in statistical publications: RPIX and RPIY. The former is perhaps better known as it is the target the Bank of England must hit (also see later).RPIX excludes mortgage interest payments. This is a useful measure because the paradoxical effect of countering inflation by, for example, raising interest rates has as its initial effect the very raising of RPI. The second measure, RPIY, excludes mortgage interest payments and indirect taxes. This can be a useful measure as, on similar reasoning to RPIX, it excludes indirect tax changes which may be aimed at inflation. In the EU, Eurostat have a measure of underlying inflation which excludes energy, certain foodstuffs, alcohol and tobacco products 5.

Impact

- 20. There is now wide agreement that the impact of inflation on an economy is very undesirable. This view stems from the undesirable consequences the high inflation world of the 1970s and 1980s had. Inflation has many effects, the chief of which are that:
 - it is primarily a monetary illusion (with 5% more income, but a 5% rise in all prices, you are no better off)

See, T Barber, Getting the real measure of core inflation, Financial Times, 29 February 2000, p.33.

- it creates problems in accounting and understanding the real financial and economic position of companies and economies (though inflation accounting standards have been developed, there remain some difficult areas)
- it leads to an unplanned redistribution of income in society (fixed income, fixed rate savers and the financially unsophisticated lose out)
- it has real resource costs (price tickets and brochures need to be updated more
 often, vending machines need changing, the tax regime becomes outdated,
 contracts and bargains need striking more frequently, etc.)
- it severely complicates financial planning and creates uncertainty, as inflation is rarely constant but has a tendency to accelerate
- · it can be bad for investment and growth
- but its major effect comes when inflation rates between countries are different. It can then lead to a loss of international competitiveness for the country with the higher inflation rate, as export prices will rise more than import prices (assuming for the moment that the exchange rate does not change). If the exchange rate of a country does not fully compensate for the differences in inflation compared with other trading nations it will lead to loss of export volume, import rises, a trade imbalance and eventually job losses in the domestic economy.
- 21. These effects also occur when different regions of a country have different inflation rates. This is effectively the situation in which Jersey finds itself in relation to the UK. It bears spelling out more fully. If the Jersey rate of inflation is greater than elsewhere and particularly the UK, then Jersey prices go up relatively. As Jersey is in monetary union with the UK, so Jersey becomes less attractive to UK mainland consumers. This hits two of the pillars of the Jersey economy - agricultural exports and tourism, which become more expensive. These two pillars lose competitive edge. The third pillar of the Jersey economy, financial services, is affected in a similar way, though the concern is not simply with the trade effect with the UK. If inflation takes off in Jersey above that of the UK (and pound sterling depreciates only for the lower rate of mainland UK inflation) then there is an increased cost of doing financial services business in Jersey. Jersey competes with other non-sterling offshore financial centres, such as Bermuda, and a rate of Jersey inflation above that of its competitors will erode the competitiveness of Jersey. This will damage Jersey's ability to attract and retain offshore financial business. The key point is that all sectors of the Jersey economy are harmed by inflation when it is out of line with the UK and its other competitors.
- 22. Looking further ahead, if the UK, and Jersey, were eventually to join EMU within the EU then any problem of differential inflation rates between the two would become more damaging. This is because EMU is a fixed rate regime for the transitional period (and will eventually become a single currency regime). To the extent that tourism and agriculture in Jersey get business from within the euro-zone, and Jersey's inflation rate, with prices measured in euros, was above that of the other euro-zone countries, this would hit their ability to sell in the UK and European markets.
- 23. The importance of keeping inflation in check, or, as it is often put, the maintenance of price stability, is now widely recognised. Indeed, it has become the financial orthodoxy of public finances in the last 20 years. Governments seek to keep their inflation rate closely matched to that of their trading competitors, and if anything to beat them so

gaining competitive advantage. Domestic RPI and other price data is closely watched by the central banks in the major economies- the Federal Reserve in the US, the ECB in the EU and the Bank of England in the UK, who are tasked with price stability (see later).

(ii) Theories and causes of inflation

- 24. There are numerous theoretical models of inflation and it is fair to say that inflation theory is far from settled. However, there are three main simple explanations.
- The first is demand pull inflation. This occurs when the total amount of demand in an economy is above the supply capacity of that economy. Put simply demand is greater than supply in all markets and the inevitable consequence is rising prices, to clear each market. The main components of demand in an economy are consumer spending, investment spending, government spending and exports (spending by foreign consumers on exported goods or on tourism within that economy). In the language of economics, demand pull inflation is when aggregate demand is above full employment output . It should be noted that full employment output does not mean output with zero unemployment, as there will always be some frictions in an economy - transitional unemployment, as workers leave jobs, perhaps voluntarily, and seek new ones, and structural unemployment. This is associated with workers having the wrong skills and competencies. This happens when sectors of an economy decline - the sunset industries. All this is often formalised into the notion of a level of unemployment below which the economy has difficulty working without inflation building up 6. Indeed for some time it was believed that a simple relationship between inflation and unemployment existed, and that as the economy pressed towards full employment an inevitable consequence was rising inflation 7.
- 26. The second main theory is cost push inflation. This can happen at any level of working of the economy, even when unemployment is high. Its main cause is some generalised increase in the costs of the economy which get passed on in higher prices. Examples of this might be widely used raw material price increases (whose prices are determined in world markets); wage rate rises (where wages are little affected by unemployment), profit increases (where monopoly power exists in key sectors), and where imported goods' prices rise (and the exchange rate does not adjust). A depreciating currency thus poses an inflation risk if the demand for imported goods is not responsive to price. One of the most well known recent causes of cost push inflation is the world oil price. There have been several occasions in the last 30 years when OPEC has engineered significant price rises. As oil is vital to most economies (through its use as a business and household fuel and through the variety of refined products originating from crude oil) this can lead to widescale cost increases in most sectors of the economy.
- 27. A third theory, which is now less accepted, is excess money growth. This focuses on the amount of money in an economy and argues that money supply changes can

Technically this is known as the NAIRU, the non accelerating inflation rate of unemployment. The NAIRU will vary for each economy depending on its characteristics, e.g. its labour market flexibility, but estimates of the UK NAIRU are around 5%. It is hard to run the economy below this level without risking inflation.

⁷ Known as the Phillips curve.

influence price levels. This monetarist approach enjoyed some favour in the 1980s in the UK, but is not now widely regarded. For that reason I will not go further into it. However it should be noted that the Bank of England does still monitor UK monetary developments very closely, and measures various monetary aggregates regularly 8.

28. Economic theory also points to the importance of a number of other considerations in analysing inflation, such as the difference between anticipated and unanticipated inflation, wage/price spirals and lags. When inflation is fully anticipated by agents in the economy then behaviour can be more "rational". Thus all wage negotiations may take account of a given rate of inflation. But when inflation is unanticipated, agents in an economy will react differently. So, for example, wage negotiations may become uneven and wage differentials get disturbed. Closely linked to this are wage/price spirals where wage negotiations take account not just of past inflation but start to build in demands for future expected inflation (so as to try to maintain the real value of after tax income in the coming year or bargaining period). When this starts to happen inflation rapidly chases itself up. Lags can also be important as many influences do not impact on the RPI immediately. Wage negotiations are staggered throughout the year. Cost increases might not get passed on immediately to final retail prices depending on how large producer and retailer stocks are. Business contracts may be fixed forward for some time. But eventually lags unwind. The practical point is that inflationary pressure can build up in an economy and not be seen in the RPI for some time. This is why policy makers must be concerned not just with the current headline RPI changes. but look also at a range of indicators of inflationary pressures and dangers. These include underlying inflation rate changes, commodities prices, credit and monetary conditions, producer price index changes, retail sales, and so on. The aim is to forecast what will happen to headline inflation over the next 1-2 years and, if necessary, try to prevent it.

(iii) UK government policy towards inflation

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- 29. Most governments subscribe to the need for an active macro-economic policy, with which they aim to manage the economy. This is to achieve all the desirable goals of economic activity: price stability (low and constant inflation on a par with other countries), high employment (low unemployment), economic growth (rising living standards) and trade balance. To this might be added other goals which moderate the above sustainable growth, environmental objectives, a fair society (in terms of the distribution of income and wealth) and so on. Achieving all these goals together, or in satisfactory combination, is, of course, what exercises public policy makers everywhere.
- 30. In principle, there are a number of possible anti-inflation policies, such as fiscal policy, monetary policy, and direct prices and incomes controls. Views of their respective merits have changed in the last 40 years. For much of the 1950s and 1960s monetary conditions were seen essentially as a by-product of other policies, which included from time to time a number of direct controls on e.g. wages, dividends and prices. These latter direct controls, usually described as prices and incomes policies, are now largely discredited. This is largely because they are at best a temporary device which freezes prices (and a key component of prices wages) but which probably does not tackle root

Various alternative definitions of money exist, from narrow money, M_0 , through wider definitions, M_1 , M_2 , M_3 and so on.

causes of inflation. The problems come when the policy is relaxed, as it must inevitably be if a market economy is to function properly. Then catch-up occurs and prices rise to levels they would have reached otherwise. This is certainly the experience with wage freezes. As soon as wages control is "off", people seek to re-establish their real take home pay and their differentials with other groups, which may have been out of kilter at the time of the freeze. Consequently few economists would now see prices and incomes controls as a permanent solution to inflation, primarily because they interfere with normal price flexibility in markets. In contrast fiscal and monetary controls have come to the fore, with the distinction between them much clearer over the last two decades.

- 31. Again in principle, fiscal and monetary controls can be used either alone or in combination with each other to tackle inflation. Fiscal measures work by directly affecting the components of demand. Direct tax rates, for example, can be raised to lower consumer incomes and so cut their spending power. Thus consumer demand can be cut. Similarly the tax regime can encourage or discourage investment spending, through allowances and so on. The government obviously has control over its own spending and can run budgets in surplus or deficit. Fiscal policy can less easily affect export demand. Monetary measures work principally through interest rates, which affect, inter alia, credit conditions and cost and hence consumer demand. Interest rates may affect the exchange rate and hence export demand.
- 32. Explicit public targets for controlling inflation have become the norm in the UK in the last 10 years. The last Conservative government set an explicit target for inflation for the first time in 1992. The aim was to keep RPIX within a range of 1 4% during the lifetime of the parliament, and within the lower part of the range, 1 21/2 %, by the end of the period. The long term aim was a rate of inflation below 2%.
- 33. The present Labour government gave the Bank of England operational responsibility for monetary policy and interest rates immediately after the general election in May 1997. A Monetary Policy Committee (MPC) was to determine interest rates. They were also given responsibility for ensuring that inflation was controlled Their new target was, and is, to keep RPIX at 2½%. Both overshoots and undershoots from this would be unwelcome. The target was symmetrical.
- 34. At the risk of some simplification, given that there are differing views on managing the economy, there is now a consensus on the UK Government's fiscal and monetary policy. This seems to stem from 1980, when the underlying framework of a medium term financial strategy (MTFS) was introduced for the first time. The objective, set out in successive versions of the MTFS, has been to ensure that monetary and fiscal policy complement one another in a coherent framework for the defeat of inflation. The short term interest rate became the main weapon.
- 35. The role of fiscal policy is now seen as setting the broad course of the economy, ensuring that demand growth is in line with the growth of full employment total output(capacity). Hence there is no excess demand in the system and no demand pull inflation. This is to be achieved via the annual budget and the annual public expenditure decisions. There is an assumption that the capacity of the UK economy can grow at a sustainable rate of 2.5%, so this colours all forward projections. The Treasury makes forward projections as part of the preparation for Budgets 9. These are

Both the Treasury and the Bank of England have large scale macro-economic models which can be used for policy simulation and forecasting, so allowing preventative action to be taken.

reported in the Treasury's Pre-Budget Report, made in November, and in the text accompanying the actual Budget - the Financial Statement and Budget Report (FSBR). The 1999 Pre-Budget Report had as its Chapter 2, an extensive explanation and justification of the need for a low inflationary environment 10.

- 36. Increasingly, fixed budgetary rules are used by governments. Such rules are often of the following sort:
 - the government share of GNP must be below x%
 - · government debt must be kept at y% of GNP
 - · budgets must balance over the economic cycle
 - growth rates of public spending, in money terms, must be kept at RPI, plus z% (often the trend growth rate of the economy)
- 37. The current UK government has a number of golden rules on the Budget. Rules of the above sort were, and remain, part of the convergence criteria which had to be met in order for EU countries to join EMU.
- 38. The role of monetary policy is, within the above, to achieve the inflation target by variations in the interest rate. As previously noted, the MPC at the Bank of England is charged with this task. The MPC looks at a range of factors in coming to its decisions to raise or lower interest rates to help achieve the target of 2.5% RPIX change. The Bank's quarterly *Inflation Report* gives an insight into the MPC's reasoning and the sorts of factors considered.
- 39. In the EU, there is of course no central government, fiscal harmonisation or budget (in the sense of setting trans-EU spending and tax rates). But EMU has meant that the ECB has become charged with ensuring price stability. It has a target of ensuring that inflation, measured by the HICP, does not breach 2.0%. As RPIX gives somewhat higher inflation rates for the same dataset than HICP, the gap between the UK target and that of the ECB does not present a major risk to the UK.

(iv) The divergence between UK and Jersey rates of inflation

- 40. Examining the movements in the RPI for Jersey and the UK over the 1968-1999 period shows that the Jersey RPI has, at least superficially, tracked that of the UK reasonably closely over the long term. Both economies have suffered similar peaks and troughs of inflation (see Charts 1 and 2). This is as might be expected given that Jersey imports a very large percentage of its goods from the UK.
- 41. However, examining the quarterly RPI movements over more recent years reveals an evident problem. Since the beginning of 1996 Jersey's RPI has been above that of the UK for 15 out of the 16 quarters. Furthermore, since the beginning of 1998 Jersey's RPI has seen a steadily widening gap with that of the UK. For the last 8 quarters there

- has been a widening inflation differential, so that for December 1999 there was a 2.6% difference in the RPI rates (see Chart 3).
- 42. There is clearly a short term problem which, for the reasons outlined previously, needs addressing. It is unlikely that specific factors can account for this steady deterioration in Jersey's inflation position. One possibility might be that Jersey's domestic economy is more concerned with services, rather than the production of goods, so that Jersey is suffering from a rate of services inflation which is higher than that for goods. This factor is also evident in the UK 11.
- 43. In the UK for 1999 food prices fell by 1.9%, the prices of other goods, excluding petrol and alcohol, fell by 2.9%, the prices of "shop" services (catering, repairs, personal and domestic services) rose by 4%, whilst the price of "non-shop" services (insurance, fares, holidays, etc.) rose by 6.7%. If Jersey's economy has a higher proportion of services in it than the UK then its inflation rate, other things being equal, will reflect this and be higher.
- 44. However, a comparison of the Jersey and UK RPI over the 1968-1999 period shows that Jersey's RPI has been persistently above that of the UK over the whole of the period (though particularly in the last decade). The result has been a cumulative divergence of price levels between the two. Thus, by 1999 Jersey prices were some 20% higher than the UK's compared to 1968 (see Chart 4).
- 45. While this is for the RPI as a whole, and while inflation in particular product groups might be different, this general inflation above the level of the UK is clearly a persistent trend of importance and it may well be a powerful factor in explaining the problems of the agriculture and tourism pillars of the Jersey economy, vis a vis the UK.
- 46. An examination of the short and long term Jersey inflation record also reveals the existence of both a short and a long term problem. These are not problems of immense size compared, say, to Turkey with its current inflation rate of 70%, but they are not trivial. Even small inflation differentials mean a potential loss of price competitiveness. It seems clear that the existing inflation rate differential, if allowed to continue, will cause increasingly serious problems for Jersey. A 1% per annum differential between Jersey and the UK leads a 10.5% price difference over 10 years and a 22% price difference over 20 years. A 2% per annum differential leads to a 22% price difference over 10 years and a 49% price difference over 20 years. This is simple compounding at work. The current (Q4 1999) inflation differential is 2.6 %.
- 47. The clear policy implication is that Jersey must address as a matter of urgency the short term increasing inflation rate differential with the UK.
- (v) An analysis of Jersey inflation : in aggregate
- 48. In order to understand the recent (post 1996) inflation record of Jersey, I have considered some of the factors underlying the RPI changes. This is not a

See, DeAnne Julius, Inflation and growth in a service economy, *Bank of England Quarterly Bulletin*, November 1998. This notes that services price inflation has been above goods price inflation by about 2% since 1988 in the UK. This is true also for other industrial countries, such as the US, Japan, France and Germany.

comprehensive analysis as some key data is not available for Jersey. In particular there is no recent published national accounts data (covering Gross National Product (GNP), the components of GNP, etc.) or trade statistics (covering imports, exports, visible/invisibles, capital flows, etc.). Hence it is impossible to know the actual economic growth rate of the Island's economy, the sustainable growth rate, the full employment level of national income, the mix of goods and services in the Jersey economy, the proportion of the former that are imported, from where they are imported, the significance of transport and energy costs, the contribution of consumer spending to inflation and so on.

- 49. These are vital gaps and policy makers in Jersey face real difficulties without such key economic statistics. Only with a reasonable picture of the performance and structure of the economy can trends be identified and anticipated.
- 50. Nevertheless, aggregate data does confirm that there has been a growing problem since 1996 and suggests some of the elements causing it. In what follows there is a certain circularity in that many of the symptoms of inflation also account for further inflation.
- 51. Looking first at asset prices, house prices have been rising rapidly since 1996, though 1999 saw some moderation. Since 1996 house prices have risen over 50% (see Chart 5). The expectation, from mortgage brokers and estate agents, is that this above-RPI growth will continue in 2000. House prices can be important in generating further inflation as they give a wealth effect to consumers. I have not investigated commercial property or land prices, but anecdotally it seems clear that there is a similar, though less spectacular, growth of commercial property prices and rents.
- 52. Wages are estimated to be 50 % of national income and as such are an important element in cost push inflation and the possibility of a wage-price spiral. Average earnings data for Jersey is collected on a June June basis, so the last information relates to June 1998- June 1999 changes. Since 1995/96 average earnings have been on a rising trend and in 1998/9 rose at 7.6%, 4.3% above the comparable year Jersey RPI (see Chart 6). Rising real wages can be accommodated without inflationary pressure if the real increase is accompanied by productivity gains, but the normal expectation of economists in the UK is that annual labour productivity gains are of the order of 1 2%. It is thought the MPC believes average earnings increases of 2% above RPI are sustainable 12. Wage pressure therefore looks to have been building up in the Jersey economy.
- 53. Government spending too has exceeded RPI growth since 1996.
- 54. Net budgeted revenue expenditure (running costs) growth in the 1990s has substantially exceeded both RPI, and RPI plus 2.5% growth (which is the UK long run trend growth rate, and which would in the UK maintain a constant share of GNP by the expenditure). Without knowing the Jersey GNP growth one cannot tell if this is leading to a rising share in Jersey GNP. But 1998 and 1999 net revenue expenditure growth was particularly fast at over 8% per annum (see Chart 7).
- 55. The position with government capital spending, which is additional and together with net revenue spending gives total government spending, is less certain. There is the reported capital programme in the Budget's Capital Fund, but the States also have a

So that average UK earnings growth of 4.5% is not overdue cause for concern with an RPIX target of 2.5%.

variety of non Capital Fund mechanisms in place, particularly in the social housing area. The overall level of government spend is therefore difficult to estimate, but it does appear to have grown rapidly in the last few years. From a macroeconomic perspective the use of non- Capital Fund mechanisms does not change the effect on the Island's resources. It is only the accounting that changes.

- 56. It is true that States' capital spending does not all add to domestic inflationary pressure, as many items, such as computer equipment, will be imported. But the absence of trade data means that this cannot be quantified. Certainly building works do add directly to demand for the Island's resources, particularly labour.
- 57. It is important also to look at the income side of the States budget as changes in taxes not only change households' after-tax incomes but also provide an important "signal". This is particularly true of indirect taxation, the impôts, as these are levied on "high profile" goods, such as alcohol, beer, cigarettes and petrol, which feature large in the population's perception of changing economic conditions. Here, impôt receipts are growing at well above RPI. This largely reflects decisions to increase the tax rates in pursuit of other strategic objectives relating to the environment and public health. In the 3 years 1998-2000 impôts receipts have (and are forecast for 2000) to grow by almost 15% per annum (Chart 8).
- 58. Much of the problem with States financing is what can be called the structural surplus it finds itself with, and the consequent pressures for expenditure because it can apparently be afforded. However this fails to distinguish between whether expenditure is financially affordable from whether it is economically desirable, bearing in mind its wider macroeconomic effects.
- As previously noted an important element of cost push inflation in the 1970s and 1980s in industrial economies has been oil price changes. Here there is no doubt that pressures are building up, not just for Jersey but for all industrial countries (although oil dependence overall is lower now than it was 20 years ago). The spot crude oil price in November 1998 was 12\$. It is now around 27\$. It is possible that current OPEGtalks will agree output expansion and bring spot prices down, possibly to around 20\$ (press reports indicate that OPEC's 'floor' price is now regarded as about 22\$, still double the price 18 months ago). But the rising oil price is certainly of concern to the MPC and the ECB. There is already evidence of effects for Jersey. The domestic heating oil price is certainly already rising, according to data from the Statistical Unit (heating oil is the main form of domestic heating in Jersey) (see Chart 9). Because of the lags in the spot price being reflected in the retail price, it is expected that the price of oil derivatives will rise over the current year. The size and timing of the impact on Jersey will depend partly on the fuel component in transport and lags, but transport is typically 5 - 10 % of the final selling price of food and is probably a higher component of Jersey food prices.
- 60. A final important indicator is provided by the Jersey unemployment rate. In January 2000, there were 201 people registered as unemployed in a workforce of 53,500. This is a rate of 0.4%. The January total is the lowest January total since records began (see Chart 10). Furthermore the number of vacancies, at 351, was above the number of registered unemployed. Even if the registered unemployed figure somewhat understates actual unemployment, because of non-registration, this is strong evidence of an economy being run beyond its capacity limits, and of the potential for well above RPI wage rises to occur. Anecdotal evidence suggests that labour retention is a big

- current problem for Jersey companies, with staff turnover very high as people seek (and can find) better paid jobs.
- 61. The above pieces of evidence all suggest that Jersey has strong inflationary pressure in its economy, a rising quarter on quarter RPI gap with the UK, record low unemployment, vacancies exceeding unemployment, rising real wages, rising asset prices, strong government spending (particularly capital spending), increasing indirect tax rates well above RPI, rising transport/heating costs (oil), and, in addition and most importantly, loose monetary conditions, with an interest rate of 6% being set for the UK economy which has an RPI of 1.8%. Such an interest rate is not set, or appropriate, for Jersey with an RPI of 4.4% in Q4 1999. The real interest rate in Jersey is lower than in the UK and is probably itself encouraging consumer borrowing and spending.
- 62. It is forecast that the Guernsey inflation rate will rise in 2000 to 3.5%. It would seem very likely that Jersey's RPI will also increase from its present level. It would not be surprising to see the RPI rise to 5% or more in 2000. This would continue the increasing inflation differential with the UK, which forecasts RPI and RPIX to stabilise at around 2% in 2000, before rising to the 2.5% target in 2001.
- (vi) An analysis of Jersey inflation: disaggregated by product and wage groups
- 63. Only a limited amount of analysis has been done here as it would require gathering an understanding of the detailed factors at work in all the sectors of the Jersey economy. However what appear to be problem sectors can be identified, based on the rate of inflation in each of the 14 product groups which make up the Jersey RPI.
- 64. Sectors where there seems to be particularly a problem in Jersey, with an RPI growth well above that of the UK, include food, motoring, household goods, clothing and footwear. One possible general explanation is a lack of effective competition in these sectors which leads to poor cost control and inefficiency and enables price rises to be imposed. The UK food sector has been galvanised recently by a Competition Commission investigation and the entry of Wal-Mart through the take-over of Asda. This suggests that, even in the UK, food retailing has had a competition problem, the difference perhaps being that in the UK there are quite strong market forces at work to limit price rises by encouraging consumer choice.
- 65. With average earnings, it is clear that Jersey has a much higher rate of earnings increase than the UK.
- 66. Analysis of the Jersey average earnings increases and the RPI for 12 industry groups shows that particular problems, of well above average increases in earnings over June 1998 June 1999, exist in transport and communications, construction and public services. The construction increase is probably confirmation of the impact that private development and public capital projects are having. The public services increase may well be related to expanding government spending: over 50% of net government spending goes on wage costs, rising to 80 90% in big departments such as Health and Education, where much extra spending has been concentrated; and restrictions on employing extra staff have, for example, generated high levels of overtime payments which also push up average earnings.

(vii) Conclusions and possible policy actions by the States

- 67. There are a number of preliminary questions that must be asked before turning to possible policy actions.
- 68. Is there an inflation problem in Jersey? The answer is clear. Jersey seems to have both a long and a short term problem. In the short term it faces a rising inflation rate differential with the UK. It seems probable that Jersey inflation will move higher from its present level.
- 69. But is this really a problem for Jersey? Can it not live with inflation? Jersey is the same as all other open economies. Inflation has many undesirable effects and particularly important is the trade effect. Jersey will find it difficult to live with a higher rate than the UK, as there is no exchange rate to adjust. The consequence of the higher inflation is a deterioration of Jersey's competitive position. All developed economies now have the price stability objective at the core of their management of the economy.
- 70. So should Jersey have an explicit inflation target? The foregoing indubitably suggests yes.
- 71. What should this be? Given that Jersey is in monetary union with the UK and is so linked to the UK for exports and imports, the obvious answer is the same as the UK, i.e. 2.5% for RPIX, or an equivalent number for the RPI.
- 72. This view is strongly reinforced by the fact that monetary conditions in Jersey are set by the authorities in the UK <u>for</u> the UK. If the Jersey interest rate reflects UK conditions, then there is an obvious problem if the inflation rate is different between the two economies (both when the interest rate is set too low for Jersey and when it is set too high). At present monetary conditions are judged by the MPC to be right for the UK in order to meet the 2.5% inflation target there, but with Jersey's inflation rate being twice as high then interest rates should ideally be higher in Jersey to achieve the same degree of monetary control. Furthermore, to achieve the same degree of anti-inflationary pressure in Jersey with a UK-set interest rate implies that Jersey should now be running a fiscal policy that is <u>more restrictive</u> than that currently being operated in the UK. This implies the Jersey economy should be run with very much more spare capacity, than at present, when there is virtually no spare capacity in the labour market at all.
- 73. So should Jersey adopt an explicit target for inflation and should it be the same inflation target as the UK? The answer must be yes. First, Jersey does not want any further loss of competitive advantage vis a vis the UK, given trade flows: secondly, the interest rate set in the UK would then be appropriate for Jersey too and Jersey's fiscal policy would not have to compensate. If this logic is accepted, it implies some medium term (i.e. over 2-3 years) transition in policy to get back down to 2.5% again.
- 74. Such a policy needs to be medium term to:

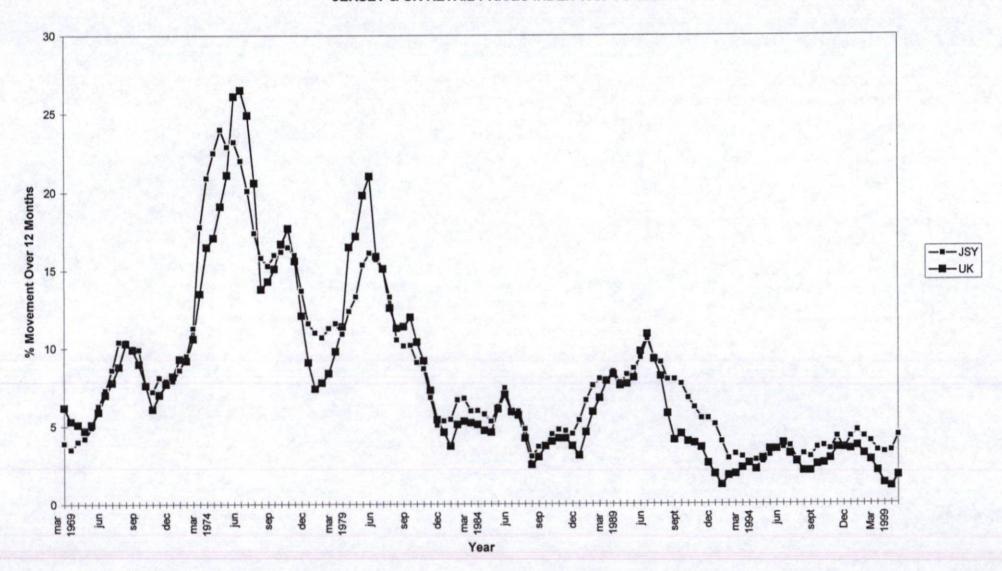
- avoid undue disruption and achieve a smooth transition from the current situation (rather as the UK's Labour government in May 1997 faced rising inflation and has stuck rigidly with the previous government's spending plans and "prudent" policies for over 2 years)
- send credible signals, so the policy change is not seen as a one-off
- bring down expectations about inflation. These will have built up over the last few years and a similar period is needed to root out the "inflationary psychology" and impress the need for price stability.
- 75. What then are the possible policy actions that are needed by the States? I will deal with these in, what seem to me, to be an ascending order of difficulty and pain. I do not consider direct wage and price controls. None of these policies is without difficulty and pain, but the alternative is to countenance a growing inflation problem which will, in time, lead to much greater pain.
- 76. First, a Government Statistical Service review of Jersey RPI methodology could be undertaken to examine the methodological points raised earlier. (This is already being put in hand by the Policy and Resources Department.)
- 77. Second, economic data collection needs significantly improving. Some new items need collecting (national income/expenditure, trade flows, company information); others need to be collected more frequently (e.g. earnings data is currently annual but should ideally be quarterly to match the frequency of RPI collection and calculation). Only with a proper up to date understanding of the economic condition of the Island can appropriate policies be developed. Obviously there are limits on what Jersey should collect, based on practicality and cost, but the data available at present is clearly insufficient.
- 78. Third, the private sector must be prepared to demonstrate that it is prepared to play its part in wage and price restraint.
- 79. Fourth, the States should try to improve competition in both labour and product markets, as competition means that cost push inflation is more difficult to pass on. Where there is strong competition cost increases are not simply passed straight on, but efficiencies are sought first. In the labour market there are many factors to consider: these include collective bargaining arrangements which in Jersey appear to be somewhat inflexible; the *Regulation of Undertakings* (which may be causing tightness, or intensifying existing tightness, in the labour market); and the ratio of vacancies to unemployment (allowing for the fact that both may be understated). In product markets, liberalisation and a proactive competition policy need consideration. It seems that there is a widespread concern that there are many markets where excess pricing and monopoly power exist. The small size of Jersey may mean that many markets remain naturally monopolistic or oligopolistic but even if this is so it does not mean that the States are impotent. Monopolies can be controlled.
- 80. Fifth, the States itself has many possibilities with its Budget and with the fact that it employs some 15% of the Island's workforce. With government revenue and capital spending, it should consider a budgetary rule, perhaps about limiting spend to a % of GNP, or to a base level plus RPI and/or plus the growth rate of the economy, at least for the short term. A critical feature of the Jersey economy is the structural surplus

problem of States' income being well above expenditure. The main problem of the structural surplus is that it has led to confusion between whether the States can afford to spend, based on purely financial/budgetary considerations, and whether it is in the Island's economic interest to do so. It is certainly not in the Island's economic interest to have an inflation differential with the UK, which has probably contributed to the problems of the agriculture and tourism pillars of the economy and which will certainly be storing up more problems for the future associated with loss of competitiveness. In turn this may have led to a possible overdependence on the financial sector, which is, in general, highly mobile globally if local conditions were to be seen as too expensive or restrictive (eg in terms of available labour and housing supply).

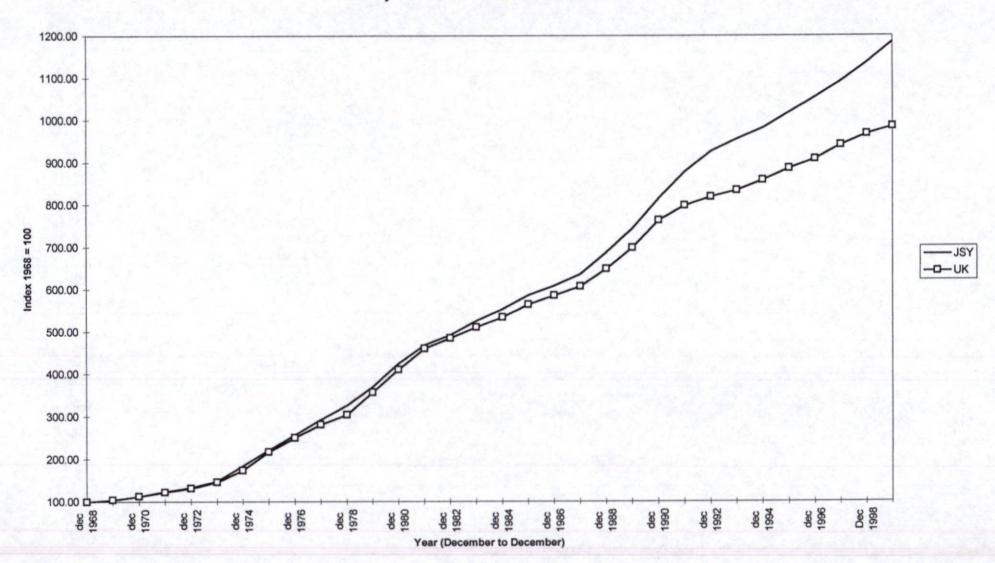
- 81. As inflationary pressures are already in the Jersey economy it is a mistake to believe there is any quick fix which can reduce or eliminate them. 'Knee-jerk' reactions, such as a one-off reduction in a States-controlled price, would perhaps have a small once-off effect on the RPI but would have no impact upon inflationary pressures as such; to the extent that a price was set below cost, without tackling the root cause of the cost, the result would just be a distortion in the real economy. Inflationary pressures have clearly been building for some time and equally it will take time, once tough policy decisions are taken, to see them subside.
- 82. The States need to decide whether tackling inflation should be a priority for policy, whether it should sit at the heart of policy making and be a top level goal, and whether they should aim to run in tandem with the UK with a similar inflation target. The conclusions of this report are that the States should do all of these things. If that is agreed, then the content of a medium term anti-inflation strategy needs to be determined in a manner consistent with the top-level decision.

Michael Parr 30 March 2000

JERSEY & UK RETAIL PRICES INDEX 1969 TO 1999



Jersey & UK Retail Prices Index 1968 to 1999



JERSEY

UK

GUERNSEY

JERSEY RETAIL PRICES INDEX 1989 TO PRESENT

		JERSEY		UK	GUERNSEY	
989	Mar	7.9		7.9	8.6	
	jun	8.5		8.3	9.0	ANNUAL MOVEMENTS 1989 TO PR
	sep	7.8		7.6	9.8	
	dec	8.3		7.7	9.7	
1990	Mar	8.7		8.1	10.1	12.0
	jun	9.4		9.8	9.7	
	sep	10.6		10.9	10.4	A A
	dec	9.4		9.3	9.8	10.0
1991	Mar	9.1		8.2	8.6	1 9
	jun	8.0		5.8	8.7	80
	sept	8.0		4.1	6.1	A Ra / Jul
	dec	7.7		4.5	5.5	
1992	Mar	6.8		4.0	4.6	x 6.0 }
	jun	6.2		3.9	4.1	1 200
	sept	5.5		3.6	3.6	in lal 1
	dec	5.5		2.6	3.2	40+ 0000 4 000
1993	Mar	5.1		1.9	2.3	A Samuel
1000	jun	4.0		1.2	1.5	20
	sept	2.9		1.8	1.8	Ad
	dec	3.2		1.9	1.4	
1004	Mar	3.0		2.3	2.9	0.0 1 1 1 1 1 1 1 1 1
1994		2.6		2.6	2.3	M 88 99 88 27 M 80 89 87 27 M 80 80 80 80 80 80 80 80 80 80 80 80 80
	jun	2.8		2.2	2.0	YEAR
	sept			2.9	2.4	
400-	dec	2.7			3.0	
1995	Mar	3.1		3.5		
	jun	3.5		3.5	3.5	
	sept	3.6		3.9	4.0	
	dec	3.7		3.2	3.6	
1996	Mar	2.8	Difference	2.7	2.5	
	jun	3.2	1.1	2.1	2.1	
	sept	3.0	1.1	2.1	2.0	
400	dec	3.6	1.1	2.5	2.8 3.1	
1997	Mar	3.7	1.1	2.6		
	jun	3.5	0.6	2.9	4.0	
	Sept	4.3	0.7	3.6	4.4	
4000	dec	3.5	-0.1	3.6	4.7	
1998	Mar	4.3	0.8	3.5	4.1	
	jun	4.7	1.0	3.7	4.0	
	Sept	4.3	1.1	3.2	4.0	
4000	dec	4.0	1.2	2.8	3.2 2.1	
1998	Mar	3.4	1.3	2.1	2.2	
	June		2.0	1.3		
	Sept		2.3	1.1	1.8	
	dec	4.4	2.6	1.8	2.4	

JERSEY & UK INDEX DEC 1968 = 100

		JSY	UK
1968	dec	100.00	100.00
1969	dec	104.20	104.70
1970	dec	113.16	112.87
1971	dec	124.36	123.02
1972	dec	134.19	132.50
1973	dec	149.35	146.54
1974	dec	185.20	174.53
1975	dec	222.42	217.99
1976	dec	258.01	250.91
1977	dec	293.36	281.27
1978	dec	326.51	304.89
1979	dec	370.03	357.33
1980	dec	425.85	411.29
1981	dec	469.29	460.65
1982	dec	492.98	485.52
1983	dec	526.33	511.25
1984	dec	554.26	534.77
1985	dec	587.22	565.25
1986	dec	609.43	586.17
1987	dec	636.88	607.86
1988	dec	688.10	649.19
1989	dec	745.21	699.18
1990	dec	815.26	764.20
1991	dec	878.04	798.59
1992	dec	926.33	819.35
1993	dec	955.97	834.92
1994	dec	981.78	859.14
1995	dec	1018.11	886.63
1996	dec	1054.76	908.79
1997	dec	1091.68	941.51
1998	dec	1135.35	967.87
1999	dec	1185.30	985.29

House Prices

Movements in house prices in Jersey are measured by the Jersey house prices index (HPI), which is a transaction based index collated from the average of resale prices of a standard collection of dwellings. Prices used in the collation of the HPI are the net sales price taken from the Jersey Property Bulletin, and exclude extraneous costs such as legal fees or agency fees. Dwellings are included in this index if they fulfil the following criteria - they are 3/4 bedroom semi-detached; post-war construction; and without intrinsic features of special value, eg sea views, granite construction, large gardens, etc.

The HPI showed a 26.9 per cent increase in house prices in 1998, which compared with an average general rate of inflation (measured by the retail prices index) of 4.3 per cent over this period. House prices were static in nominal terms between 1994 and 1995.

The Jersey House Prices Index

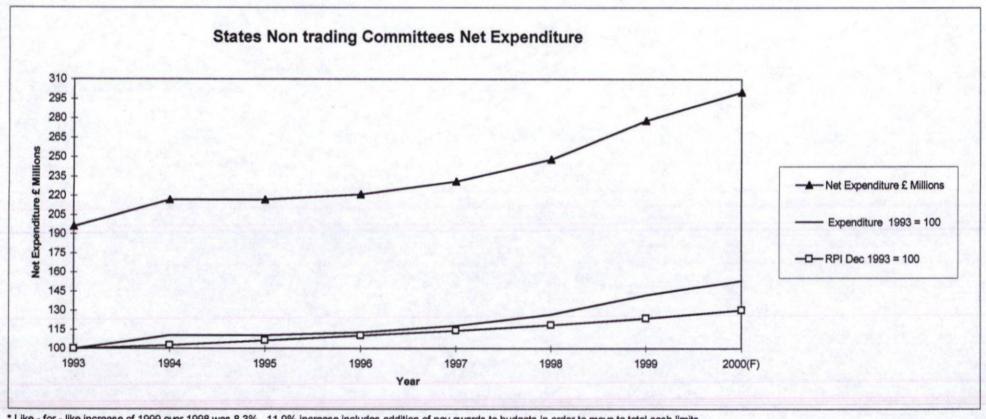
	Price	index	movement (%)
1985	57	100	
1986	61	107	7.0
1987	69	121	13.1
1988	81	142	17.4
1989	99	174	22.5
1990	118	207	19.0
1991	128	224	8.2
1992	137	240	7.1
1993	136	238	-1.0
1994	140	244	2.5
1995	140	244	0
1996	148	258	5.7
1997	171	299	15.8
1998	217	379	26.9
1999	244	426	12.4

JERSEY AVERAGE EARNINGS INDEX

YEAR	EARNINGS %	RPI JUNE
1973		
1974	18.4	20.9
1975	26.3	23.2
1976	21.5	15.8
1977	16.6	16.5
1978	13.3	11.0
1979	13.4	10.9
1980	16.0	16.1
1981	13.6	10.5
1982	9.1	8.7
1983	6.5	5.4
1984	6.4	6.0
1985	6.5	7.4
1986	6.5	3.0
1987	6.2	4.8
1988	8.2	6.7
1989	9.5	8.5
1990*	9.9	9.4
1991	8.6	8.0
1992	6.0	6.2
1993	6.1	4.0
1994	4.6	2.6
1995	2.3	3.5
1996	5.0	3.2
1997	4.7	3.5
1998	6.4	4.7
1999	7.6	3.3

^{*} Prior to 1990 earnings information was collected by the Jersey Wage Index

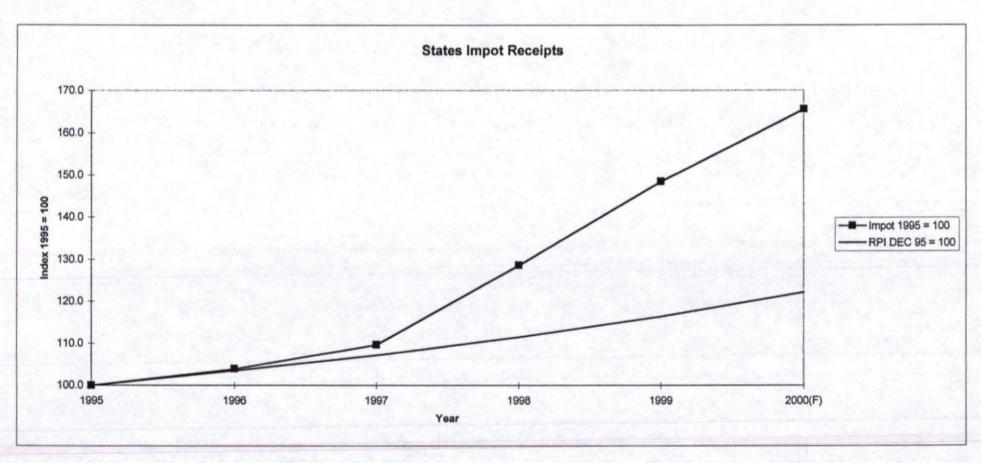
			Net Expenditure £ Millions		
Year	Net Expenditure £ Millions	% increase	Expenditure 1993 = 100	Dec RPI	RPI Dec 1993 = 100
1993	196		100.00		100.00
1994	217	10.7	110.70	2.7	102.70
1995	217	0	110.70	3.7	106.50
1996	221	2	112.91	3.6	110.33
1997	231	4.7	118.22	3.5	114.20
1998	248	7.4	126.97	4.0	118.76
1999	278	11.9*	142.08	4.4	123.99
2000(F)	300	7.8	153.16	5.0(F)	130.19



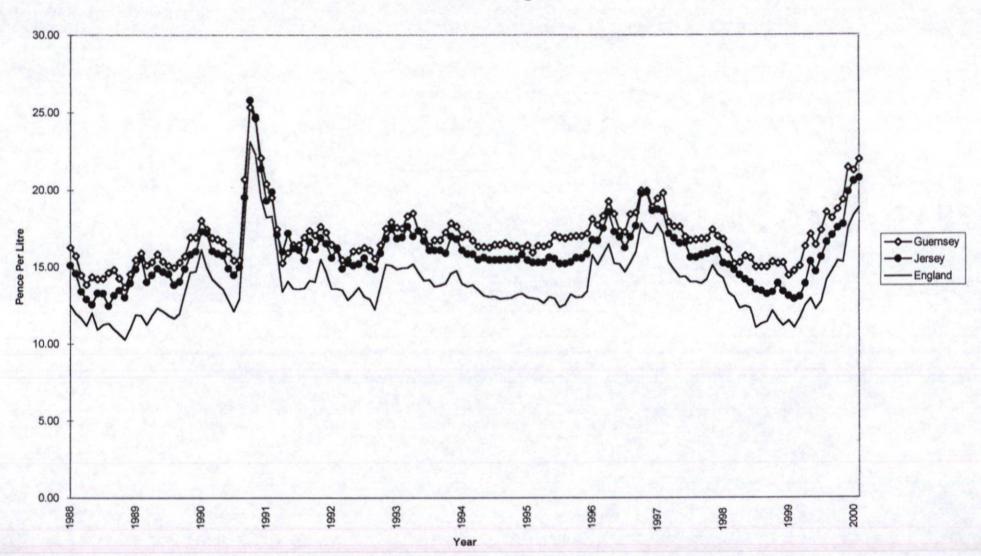
^{*} Like - for - like increase of 1999 over 1998 was 8.3%. 11.9% increase includes addition of pay awards to budgets in order to move to total cash limits.

CHART 8

Impot receipts £'000	Percentage increase	Impot 1995 = 100	December RPI	RPI DEC 95 = 100
22.234		100.0		100.0
23.123	4	104.0	3.6	103.6
24.401	5.5	109.7	3.5	107.2
28.588	17.2	128.6	4.0	111.5
33.010	15.5	148.5	4.4	116.4
36.790	11.45	165.5	5.0	122.2
	23.123 24.401 28.588 33.010	22.234 23.123 4 24.401 5.5 28.588 17.2 33.010 15.5	22.234 100.0 23.123 4 104.0 24.401 5.5 109.7 28.588 17.2 128.6 33.010 15.5 148.5	22.234 100.0 23.123 4 104.0 3.6 24.401 5.5 109.7 3.5 28.588 17.2 128.6 4.0 33.010 15.5 148.5 4.4



Domestic Heating Oil



REGISTERED UNEMPLOYMENT 1996 TO DATE

1996	JAN	562
	FEB	563
	MAR	476
	APR	386
	MAY	345
	JUN	367
	JUL	427
	AUG	326
	SEP	371
	OCT	414
	NOV	453
	DEC	445
1997	JAN	427
	FEB	434
	MAR	336
	APR	308
	MAY	259
	JUNE	264
	JUL	268
	AUG	264
	SEP	289
	OCT	276
	NOV	286
	DEC	267
1998	JAN	290
	FEB	265
	MAR	233
	APR	263
	MAY	225
	JUNE	222
	JUL	225
	AUG	199
	SEP	233
	OCT	243
		227
1999	JAN	234 258
1333	FEB	236
	MAR	195
	APR	204
	MAY	191
	JUNE	198
	JUL	208
	AUG	170
	SEP	155
	OCT	151
	NOV	185
	DEC	169
2000	JAN	201
2000	FEB	219
	FEB	219