CONFIDENTIAL

COMMITTEE OF GOVERNORS OF THE
CENTRAL BANKS OF THE MEMBER STATES
OF THE EUROPEAN ECONOMIC COMMUNITY

ECONOMIC UNIT

MONETARY POLICY INTENTIONS FOR 1993

SUPPLEMENT
STUDIES FOR THE EX-ANTE REPORT

NOVEMBER 1992

STUDIES FOR THE EX-ANTE REPORT

The attached note by the Economic Unit provides background material which was presented to the Monetary Policy Sub-Committee and drawn on in the production of the Ex-ante Report. Three topics are addressed:

I. Uncertainties in the outlook: three simulation exercises using the NIGEM global econometric model

II. Business and Consumer confidence

III. Interest rates and economic activity

Committee of Governors of the
Central Banks of the Member States
of the European Economic Community

Economic Unit

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STUDIES FOR THE EX ANTE REPORT

I. UNCERTAINTIES IN THE OUTLOOK: THREE SIMULATION EXERCISES USING THE NIGEM GLOBAL ECONOMETRIC MODEL

Considerable uncertainty surrounds the outlook for world economic growth and, consequently, for the likely external demand stimulus to the Community. The prospects for the dollar are also very difficult to predict: although market practitioners seem to expect a rebound, its strength and timing are controversial. In order to gain some insights into the possible impact of changes in external conditions, simulations were carried out using the NIGEM global econometric model. A generalised cut in Community interest rates was also investigated to establish a tentative benchmark of the price and output responses to changes in interest rate conditions.

Before describing the simulations and presenting the results, it is worth recalling that the purpose of the exercise is only to offer some "rough rules of thumb". The country blocks of the model are relatively simple and standardised; consequently some institutional aspects, important both for the reaction to external shocks and for the transmission of monetary policy impulses, may not be adequately captured. This may in particular affect the dynamic responses to the shocks.[1]

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1 It should also be noted that the model comprises detailed blocks only for the four largest Community countries. The EC is therefore proxied by a weighted average of these countries.

Three sustained shocks were considered:

- an appreciation of 10% in the dollar exchange rate vis-à-vis all currencies;
- a 5% reduction in non-Community countries' imports;
- a reduction of 1 percentage point in the three-month interest rate of all Community countries.

The first and second simulations were carried out assuming constant nominal interest rates to evaluate the effects of the shocks in the event of no reaction by monetary policy. Further, to simplify the interpretation of the results, nominal exchange rates were kept constant in the second and third simulations.

The results are presented in Table 1. In line with the usual practice, the impact of shocks on <u>income</u> are reported as % changes in the <u>level</u> from the base (and hence, for example, the third year figure corresponds to the cumulative effect on the income level over the three-year horizon), while the impact on prices are reported as changes in <u>inflation</u> in percentage points (and hence the cumulative effect on the price level at any point in time will be given by compounding the yearly figures).

As can be expected, the appreciation of the dollar increases both output - through the boost in trade resulting from the improvement in competitiveness - and inflation - through the demand stimulus and the increase in import prices. The strength of the stimulus to output varies across countries reflecting the relative importance of trade to the dollar area and the short-run domestic multipliers. Also, the impact on inflation varies across countries both in magnitude and profile, with the highest cumulative effect in the UK.

Weaker external demand reduces growth in the Community far more than it contributes to reducing domestic inflation. The first year impact on real income appears to be about two times larger in Germany than in the other countries, although by the third year it is around the same level. A quicker reaction of consumption to income changes in the model explains this difference.

The effects of an interest rate cut in the model are also felt predominantly on activity. Inflation is only relatively marginally affected. Given the analysis of the interest rate transmission mechanism in

Section 3 of this note, the relative magnitudes of the individual country responses are a little surprising. While a relatively high interest rate elasticity of activity in the United Kingdom might be expected given the high level of personal sector debt and the importance of variable rate financing, the relatively large size of the model response in Germany compared for example to that in France is not supported by the evidence from balance sheets. This suggests that more analysis is needed before drawing any firm conclusions. Evidence from national models in this field would be interesting.

II. BUSINESS AND CONSUMER CONFIDENCE

Business and consumer confidence have fallen sharply in recent months throughout the Community, from an already relatively depressed level. According to survey evidence, sentiment deteriorated steadily through the summer months and was then given a further jolt in September and October by the exchange market crisis. In October, the economic sentiment indicator produced by the Commission, which combines business and consumer confidence, fell quite close to the cyclical low point reached in October 1982. No improvement in economic conditions is seen in the near future: manufacturing firms are expecting to reduce output as order books have weakened, while consumers are delaying major purchases reflecting their concerns about the deteriorating economic climate and widespread fears of rising unemployment. The only bright spot is that inflationary pressures are continuing to recede in the weak conditions: the percentage of firms expecting to raise prices in the months ahead has fallen to a historically low level.

Caution is needed in interpreting very recent developments. Survey evidence is often quite volatile and in this particular instance, there is a risk of some over-reaction in the initial responses after the crisis. Some recovery might be expected as tensions have eased in many countries and interest rates have been reduced, although the pervasive sentiment in the Community is very gloomy even discounting this possibility. As a result, domestic demand is likely to remain depressed in the near future.

III. INTEREST RATES AND ECONOMIC ACTIVITY

The tensions experienced within the ERM in September exacerbated policy dilemmas for the monetary authorities in some countries whose currency came under pressure. While interest rate changes are one of the key instruments provided by the Basle-Nyborg Agreement for countering foreign exchange market pressure, concerns arose about the effect of higher interest rates on real output, particularly in countries where activity was already weak. Against this background, this section provides some evidence on the effect of interest rate movements on economic activity in EC countries.

Interest rate changes affect economic activity through a variety of channels, traditionally classified into substitution effects, income effects, wealth effects and exchange rate effects which all give rise to changes in aggregate expenditure - consumption, investment and net exports. Attempts to estimate the magnitude of the effect of interest rate changes in different countries have, to date, met with mixed results. In relation to business fixed investment and inventory investment, it appears to be difficult to establish a robust link with interest rate movements, and the behaviour of these variables is typically largely determined by 'accelerator' effects from output in econometric models. The evidence on housing investment suggests a significant and relatively robust role for interest rates while recent evidence also suggests an important role in determining the level of consumer expenditure, via the effect on the value of consumer wealth. In addition, there is considerable statistical evidence that expenditure on consumer durables is sensitive to changes in interest rates.

While the empirical evidence thus suggests that on balance, interest rate movements do exert a significant influence on economic activity, the extent to which monetary policy actions can influence real output through these channels depends crucially on two issues, i) the relative importance of long and short interest rates and ii) the condition of corporate and personal balance sheets.

1. Long vs. Short Rates

It appears that, for most Community countries, long rather than short rates are more important for economic activity. While expenditure on consumer durables is more responsive to changes in short rates, investment usually involves long-term projects which should be more sensitive to long rates either because fixed-rate lending is the norm or (in the case of countries where variable rates are more prevalent) because of the importance of expectations of short rates over the life of the asset.

However, in this context, the extent to which monetary authorities can exercise control over long interest rates is uncertain as the response of long rates to monetary policy actions depends on a range of factors such as the credibility of policy, market expectations etc. In some recent cases, for example, increases in short rates have been accompanied by reductions in long rates. The inability of monetary authorities to control long rates thus limits the extent to which monetary policy actions impact on output.

Variations in lending practices are important in this context.[2] In most Community countries, mortgage lending and lending to business is at a fixed rate linked to long term market rates at the time the loan is taken out. In these cases the response of activity to movements in short term market interest rates will be muted. On the other hand, such movements will have a more powerful effect in countries where the bulk of bank lending and housing finance is at variable rates closely linked to short-term market rates (e.g. Ireland and the UK). In these countries, it is not possible to insulate economic agents from the effects of higher short term interest rates, even if the increases are expected to be short-lived. France occupies an intermediate position between these two extremes, with variable rate lending accounting for 30% of bank credit.

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2 See Table 3 for details of lending practices in different EC countries.

2. Sectoral Balance Sheets and Asset Prices

The responsiveness of economic activity to movements in interest rates also depends on the condition of household and corporate balance sheets, since both the size and the direction of the income and wealth effects, mentioned above, will largely reflect this factor. Some evidence on sectoral financial balance sheets for France, Germany and the UK is presented in Table 5.[3]

In relation to the personal sector, the ratio of financial liabilities to household income doubled in the UK over the 1980s and, at 85%, is particularly high compared to France or Germany. Largely as a consequence, interest payments in the UK amounted to 11% of income in 1990, well above the levels prevailing in France and Germany (see Chart 1).

While the UK personal sector holds a substantial amount of financial assets, the bulk of this is accounted for by equity in life assurance/pension funds. Excluding this item, the UK household sector moved over the 1980s from a net creditor to a net debtor position, linked, in part, to financial deregulation. In Germany, in contrast, personal sector deposits greatly exceed lending to the personal sector while in France, the excess of personal sector lending over deposits is significantly smaller than in the UK.

The value of the housing stock comprises a major component of the assets of the personal sector. On the basis of information supplied by central banks, changes in the value of this component of household wealth have varied considerably across countries in recent years.[4] In Germany, house prices have risen sharply since the mid 1980s, rising by around 30% since 1986. Thus the contribution to household wealth from housing has been favourable in the second half of the 1980s. In France, house prices have fallen slightly in 1991 and 1992, after rising strongly between 1985 and 1989. UK house prices have fallen on average by 11% since the peak in 1989 with the reductions particularly concentrated in southern England. Since housing accounts for about half of personal sector wealth, this represents

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3 Data presented in this section derive from OECD sources for France and Germany and from HMCSO in the UK.

4 A summary of this information on asset prices is presented in Table 4.

a significant fall in the value of household wealth. Some households have been particularly hard-hit. According to Bank of England estimates, some 830,000 households who borrowed to purchase residential property at high loan-to-value ratios in the late 1980s, are now in a situation where the value of the loan outstanding exceeds the market value of the property. The total amount of this "negative equity" is estimated at £6 billion, equivalent to 14% of total personal savings in the UK.

In all three countries the non financial corporate sectors are net debtors. In 1990 the ratio of long and short-terms loans to corporate income were: 332% in France, 206% in Germany and 151% in the UK. It is notable that over the 1980s, the ratio of debt to income fell substantially in France, remained broadly unchanged in Germany, while in the UK the ratio doubled over the same period.

The structure of corporate sector balance sheets is reflected in the degree of income gearing in the three countries (see Chart 2). In France interest payments amounted to 33% of corporate income in 1990, significantly higher than in either Germany or the UK but below the levels recorded in the early 1980s. In Germany corporate interest payments amounted to 26% of income, much the same as in the early 1980s. In line with the growth in liabilities mentioned above, the UK corporate sector has seen its ratio of interest payments to income double, to 24% in 1990.

To summarise, in relation to the personal sector, the evidence presented above suggest that the UK personal sector - with its relatively high level of debt combined with the effect of a significant fall in house prices - is likely to be particularly vulnerable to a rise in interest rates. On the other hand, the relatively lower level of corporate indebtedness in the UK might suggest that the UK corporate sector is less vulnerable than other Community countries. However, the advantage of a lower relative debt level may be offset by the fact that much corporate borrowing in the UK is at variable rates.

TABLE 1: UNCERTAINTIES IN THE OUTLOOK (SIMULATIONS USING THE NIGEM GLOBAL ECONOMETRIC MODEL)

	GDP LEVEL (% CHANGE FROM BASE)					CONSUMER PRICE INFLATION (CHANGE FROM BASE IN % PTS.)				
	GERMANY (WEST)	FRANCE	ITALY	UK	EC(4)(a)	GERMANY (WEST)	FRANCE	ITALY	UK	EC(4)(a)
DOLLAR APPRECIATION (b) US dollar 10% higher against all other currencies (nominal interest rates unchanged) (c)										
1993	0.48	0.20	0.18	0.24	0.28	0.14	0.28	0.38	0.42	0.30
1994	0.42	0.42	0.31	0.54	0.42	0.33	0.44	0.23	0.36	0.34
1995	0.34	0.41	0.32	0.58	0.41	0.27	0.27	0.21	0.46	0.30
WEAKER EXTERNAL DEMAND (b) 5% fall in all export markets outside the Community (interest rates and exchange rates unchanged)										
1993	-0.50	-0.20	-0.22	-0.29	-0.31	-0.03	-0.04	-0.02	-0.02	-0.03
1994	-0.53	-0.37	-0.33	-0.39	-0.41	-0.11	-0.08	-0.08	-0.11	-0.10
1995	-0.53	-0.42	-0.39	-0.44	-0.45	-0.09	-0.05	-0.09	-0.13	-0.09
LOWER INTEREST RATES IN THE COMMUNITY (b) All Community interest rates -1 percentage point (exchange rates unchanged)										
1993	0.22	0.06	0.04	0.16	0.12	0.01	0.01	0.01	0.01	0.01
1994	0.63	0.18	0.16	0.51	0.38	0.09	0.06	0.05	0.11	0.08
1995	0.83	0.25	0.23	0.77	0.53	0.15	0.08	0.08	0.23	0.14

(a) Weighted average using 1989 shares in GDP and consumers' expenditure, respectively, converted at purchasing power parity exchange rates.
(b) All shocks are assumed to start in the first quarter of 1993.
(c) "Proxies" for effective exchange rates depreciate by 2.5% in Germany, 2.2% in France, 2.0% in Italy and 2.5% in the United Kingdom.

TABLE 2: BUSINESS AND CONSUMER CONFIDENCE IN THE COMMUNITY
(Difference between the percentages of respondents giving positive and negative replies.)

	INDUSTRIAL CONFIDENCE(manufacturing)						COMMENTS	CONSUMER CONFIDENCE					
	AVERAGE 1989-90	1991	1992					AVERAGE 1989-90	1991	1992			
			H1	AUGUST	SEPTEMBER	OCTOBER				H1	AUGUST	SEPTEMBER	OCTOBER
BELGIUM	2	-15	-16	-21	-22	-24	Business and consumer confidence have deteriorated steadily in recent months.	1	-7	-10	-13	-14	-16
DENMARK	1	-8	-6			-11	Sharp fall in consumer confidence in September, but level much higher than in the 1987-90 period.	-11	-2	-1	1	-2	-5
GERMANY (WESTERN)	7	0	-12	-16	-20	-25	Business sentiment deteriorated markedly in September and October.			Although an index is produced by a Society for Consumption Research and is published by Eurostat, this is considered to be unreliable.			
GREECE							Business confidence has been weakening since October 1991.(a)	-19	-27	-30	-36	-35	
SPAIN	-9	-22	-20	-25	-23	-33	Consumer confidence has fallen sharply in 1992, while business confidence remains very weak.	-1	-6	-11	-29	-26	-31
FRANCE	0	-20	-17	-21	-22	-25	Business sentiment remains pessimistic.	-12	-21	-22	-23	-20	-20
IRELAND	5	-9	-2	1	-4	-8	Business confidence rose up to August but has deteriorated subsequently. Consumers continue to be gloomy.	-7	-18	-21	-19	-21	-24
ITALY	4	-13	-14	-16	-17	-20	Confidence declined sharply during the summer from already depressed levels.	-6	-13	-15	-18	-25	-28
LUXEMBOURG							Business sentiment has worsened markedly in recent months.			No information is available.			
NETHERLANDS	1	-5	-5	-5	-7	-6	Confidence declined recently, following an improvement in early 1992.(b)	6	-10	-12	-6	n.a.	-13
PORTUGAL	-3	-7	-8	-12	-16	-16	Sentiment has deteriorated significantly in recent months.	-6	3	-2	-6	-4	-8
UNITED KINGDOM	-10	-32	-22	-28	-29	-24	Renewed sharp fall in confidence after false dawns in late 91 and early 92.	-22	-17	-11	-18	-20	-24
EUROPEAN COMMUNITY	1	-14	-15	-19	-21	-23	Consumer and business assessments of the economic situation in the Community are more and more pessimistic.	-8	-14	-15	-19	-20	-23

National Sources and European Economy. Most data are seasonally adjusted.

(a) Eurostat figures from a different source show a constant balance of -3 between July and October.

(b) Eurostat figures for consumer confidence show a flatter profile, with consumer confidence at a constant balance of -6 between July and October.

TABLE 3: Private Sector Lending Practices in EC Countries: Summary of Information Supplied by Central Banks.

Belgium: Variable rate lending is uncommon in Belgium, except for some mortgages and long term commercial credit roll-overs. A new law introduced in April 1992 should greatly increase the scope for variable rate mortgage lending.

Denmark: Mortgage credit is at fixed rates for up to 30 years. The corporates sector also uses mortgages. Other lending to the private sector is at variable rates linked to short term rates.

Germany: The total amount of medium and long term lending is about 3 to 4 times as large as short term lending.

Greece: Lending is at rates which are adjusted, retrospectively in the case of long term loans, in line with the administered rate on savings deposits.

Spain: Some 22% of lending is at variable rates. However, even in the case of these loans, the response of rates charged to market rates may be slow and incomplete due to factors such as: difference between the reference rate and market rate; administrative delays and market segmentation.

France: Approximately one-third of bank credit is at variable rates.

Ireland: Virtually all lending is a rates which are variable and linked to short term money market rates.

Italy: About 6% of lending is at variable rates, while the rates on overdraft facilities, which account for 49% of lending, may be adjusted in line with movements in market rates (mostly the discount rate).

Luxembourg: The greater part of lending is at variable rates.

Netherlands: Borrowing at variable rates is not common, but interest rates for consumer credit are sensitive to short and medium term interest rates.

United Kingdom: Personal sector lending, including 80% of mortgages, is largely at variable rates. The majority of large and small companies borrow at variable rates.

TABLE 4: Summary of Information Supplied by Central Banks regarding Asset Prices

Belgium: House Prices have risen steadily since the mid 1980s, recording a total increase of 43% between 1987 and 1992.
Share Prices have fallen by around 18% since 1989.

Denmark: Overall, house prices have been relatively subdued since the mid-80s, falling by 8% in 1987 and by 11% between 88Q4 and 90Q4 before showing some recovery thereafter.

Germany: House prices have risen strongly since 1987, rising by around 30% in total. Latest data show an annual rise of around 9%.

Greece: No official house price series is available. But indicators suggest that house prices are now stagnant after a boom in 1987-1990.
Share Prices have been on an uninterrupted slide since 1989.

Spain: House Prices boomed between 1985 and 1990, rising in real terms by 110 to 170% in the Madrid area, reflecting strong income growth and the effects of deregulation. Since 1990, real house prices have fallen.

France: After strong growth between 1985 and 1989, house prices fell slightly in 1991 and 1992. Share prices have not recorded significant movements recently.

Ireland: The increase in house prices has moderated to about 2-3% a year since 1990, after rapid growth of 10% per annum in 1988-1990.

Italy: House prices are stable at present, after recording a strong increase between 1987 and 1991. Share and bond prices have been falling over the course of 1992.

Netherlands: After collapsing between 1978 and 1985, house prices have recovered since then but have only recently reached the level recorded in 1978. Share prices have been declining since May 1992.

United Kingdom: House prices have fallen by 11% since the 1989 peak; Commercial prices and rents have fallen by 34% and 23%,respectively. Some 832,000 households now have negative equity equivalent to a total value of £6 billion.

Table 5. Personal and Corporate Sector Balance Sheet Data
(% of Sector Income)

A. Personal Sector Financial Balance Sheet:

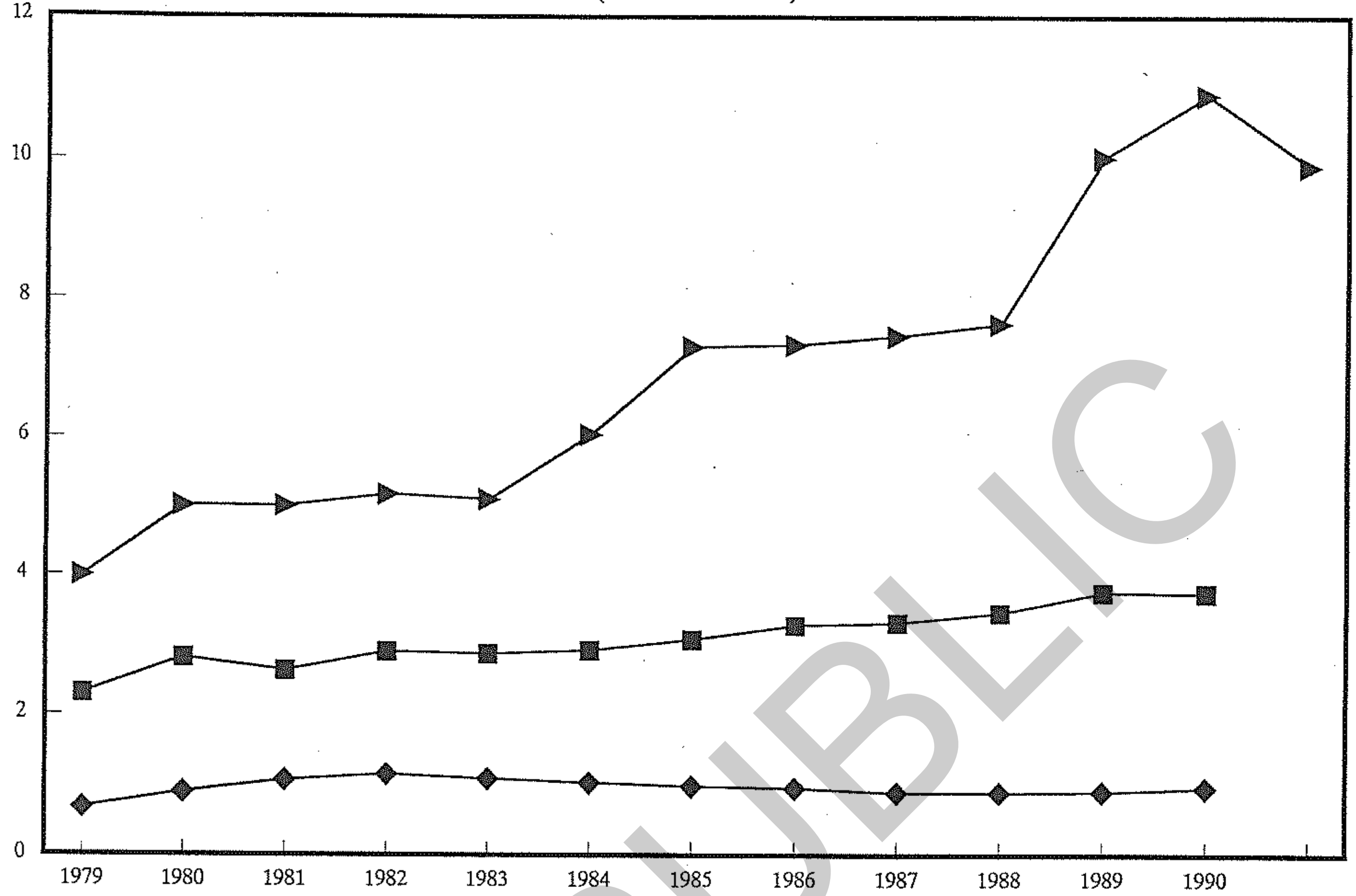
	1979			1990		
Assets:	France	Germany	UK	France	Germany	UK
Deposits	40	52	49	37	52	62
Equities	11	5	18	60	7	20
Other	40	44	76	47	70	141
Total	91	101	143	144	129	223
Liabilities:						
Loans	27	7	33	45	11	75
Other	17	3	13	8	0	10
Total	44	10	46	53	11	85
Net Financial Assets	47	91	97	91	118	138

B. Corporate Sector Financial Balance Sheet:

	1979			1990		
	France	Germany	UK	France	Germany	UK
Total Assets	657	178	272	1058	230	391
Liabilities:						
Shares	387	68	222	879	96	515
Loans	422	214	70	332	206	151
Other	363	49	175	280	50	163
Total	1172	331	467	1491	352	829
Net Financial Assets	-515	-153	-195	-433	-122	-438
Memo: Share of Corporate Liabilities						
Shares	33.1	20.5	47.5	58.9	27.2	62.1
Loans	36	64.6	14.9	22.2	58.5	18.2
Other	30.9	14.8	37.4	18.7	14.2	19.6

1. Personal Sector Interest Payments

(% of Sector Income)



2. Corporate Sector Interest Payments

(% of Sector Income)