

**MANUFACTURING PRODUCTION, AUSTRALIA  
AUGUST 1994, PRELIMINARY**

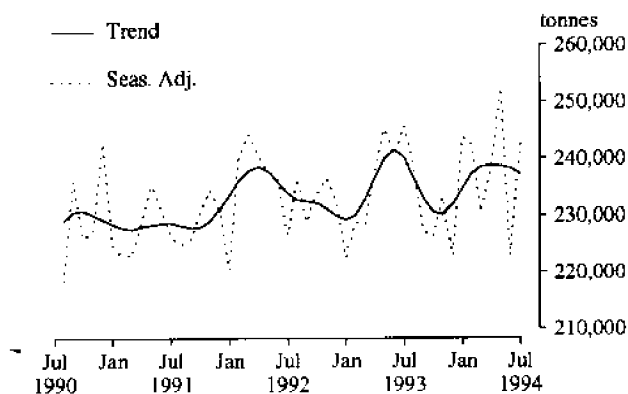
**NOTES**

This publication presents preliminary monthly estimates for selected major indicators of manufacturing production for Australia. The statistics are collected from all the relevant manufacturing establishments other than single establishment manufacturing enterprises with fewer than four persons employed and are part of a much broader range of items published quarterly. For details of these see "Related publications" in the Explanatory Notes at the back of this publication.

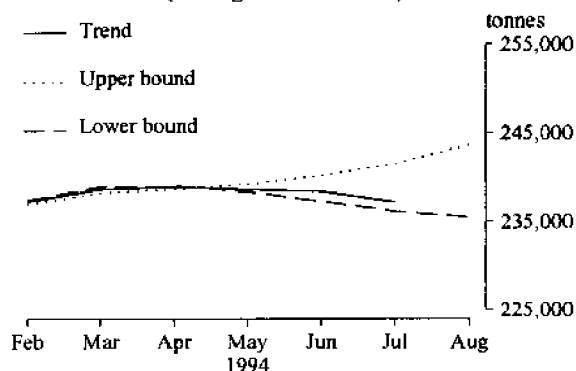
**IAN CASTLES**  
Australian Statistician

**PRODUCTION STATISTICS, AUSTRALIA : LONGER TERM TRENDS AND SHORT TERM SENSITIVITY ANALYSIS**

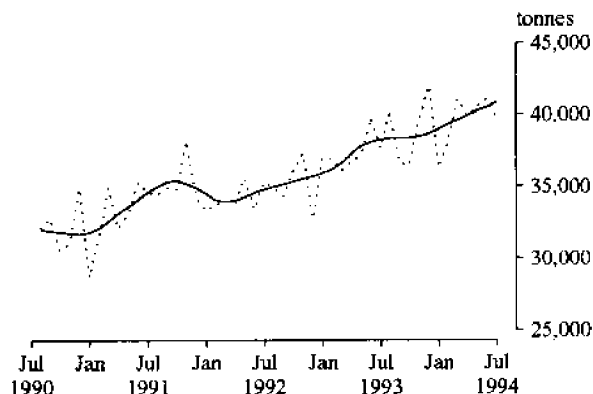
**M1. RED MEAT(a)**



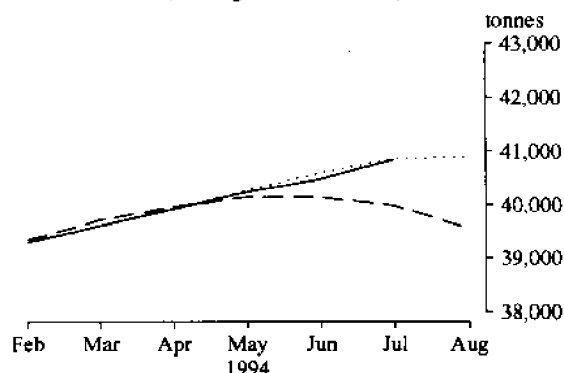
**M1. RED MEAT  
(Average movement 4%)**



**M2. CHICKEN MEAT(b)**



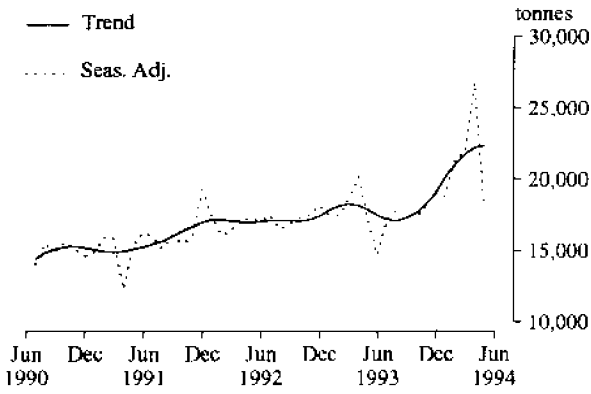
**M2. CHICKEN MEAT  
(Average movement 4%)**



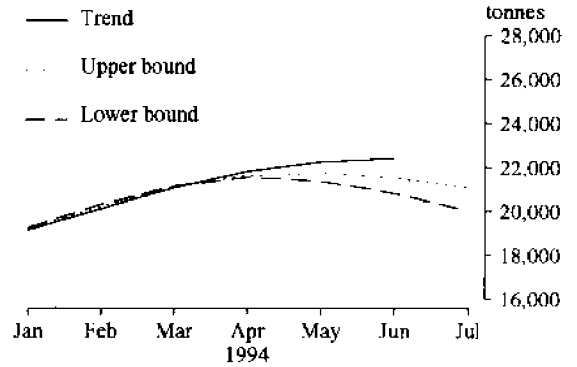
**INQUIRIES**

. for further information about statistics in this publication and the availability of related unpublished statistics, contact Rod Smith on Melbourne (03) 615 7635 or any ABS office.  
. for information about other ABS statistics and services please refer to the back page of this publication.

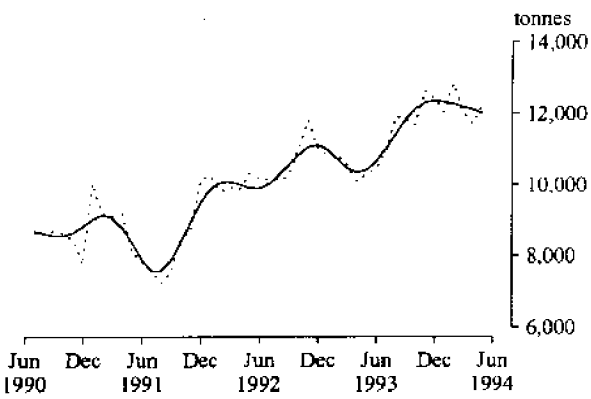
**M3. CHEESE(c)**



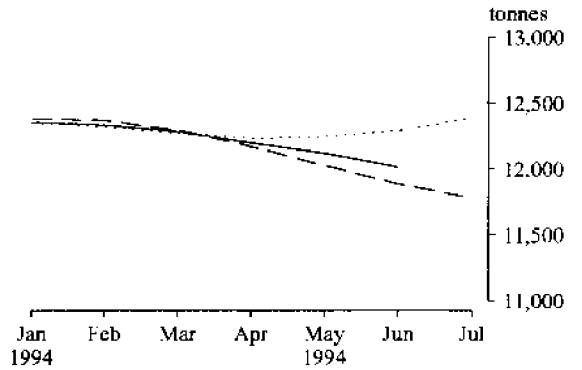
**M3. CHEESE**  
(Average movement 7%)



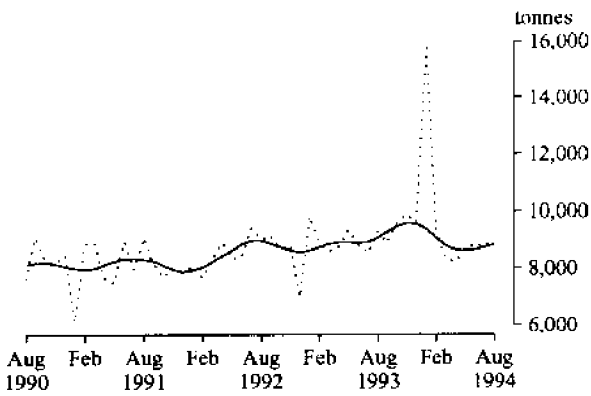
**M4. BUTTER(c)**



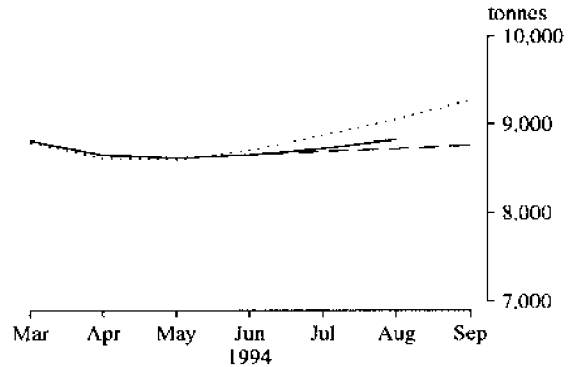
**M4. BUTTER**  
(Average movement 6%)



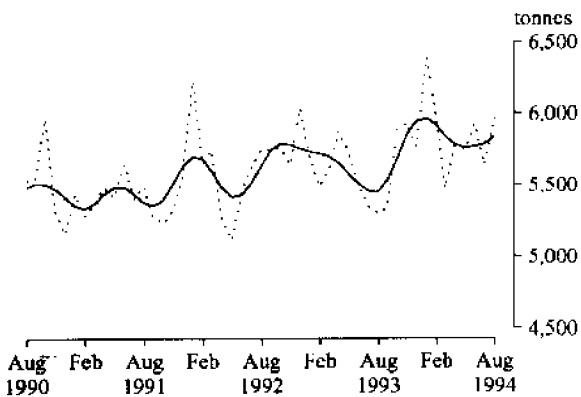
**M5. CHOCOLATE BASE CONFECTIONERY**



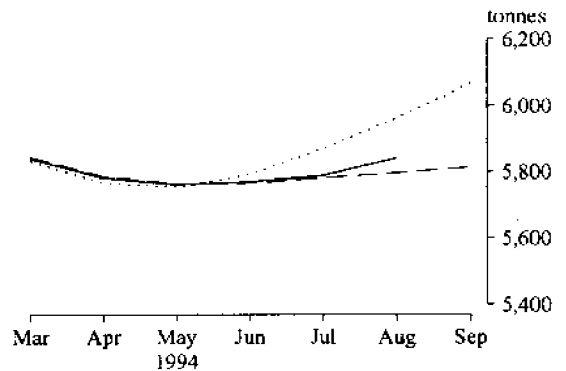
**M5. CHOCOLATE BASE CONFECTIONERY**  
(Average movement 7%)



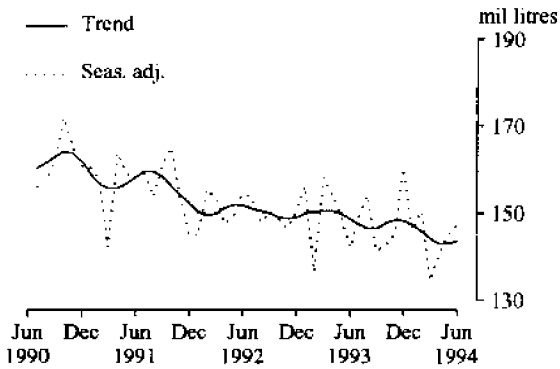
**M6. OTHER CONFECTIONERY**



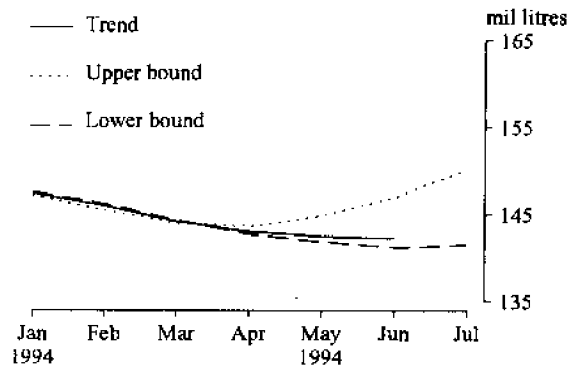
**M6. OTHER CONFECTIONERY**  
(Average movement 5%)



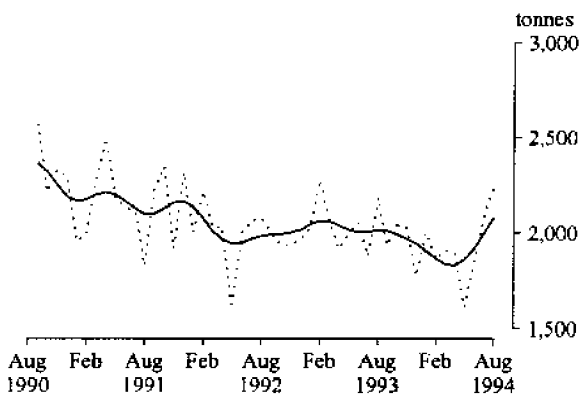
**M7. BEER(d)**



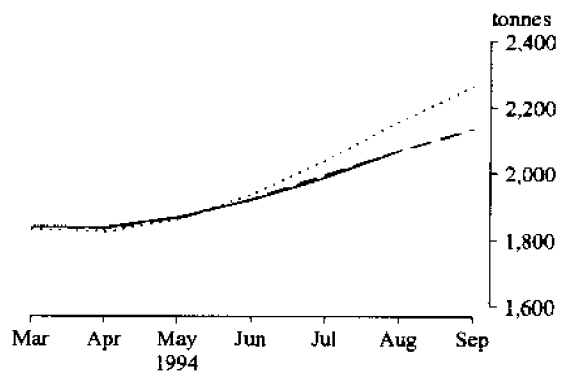
**M7. BEER**  
(Average movement 7%)



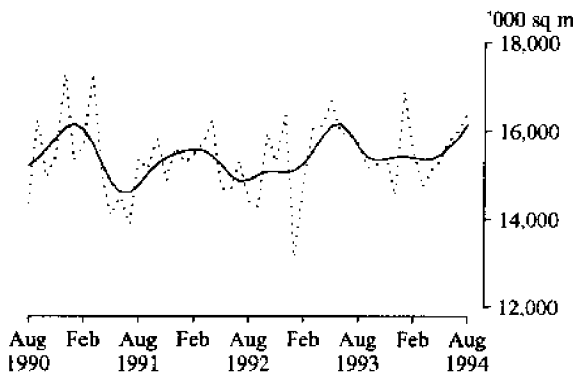
**M8. TOBACCO AND CIGARETTES(e)**



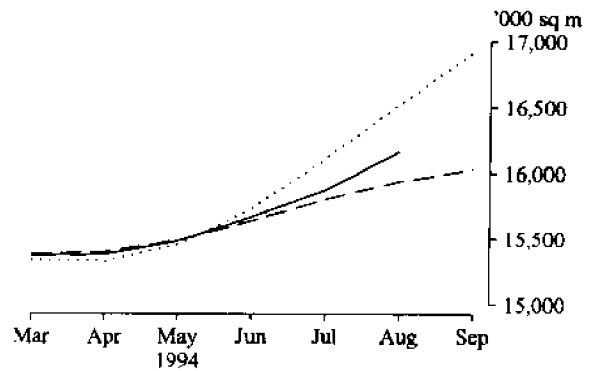
**M8. TOBACCO AND CIGARETTES**  
(Average movement 7%)



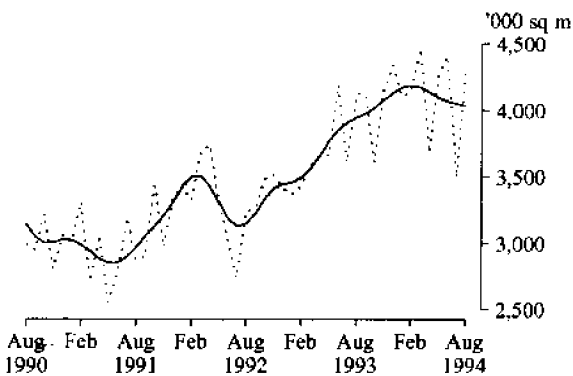
**M9. MAN-MADE FIBRE WOVEN FABRIC**



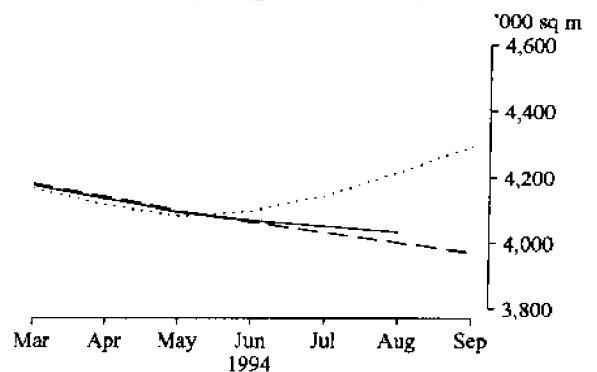
**M9. MAN-MADE FIBRE WOVEN FABRIC**  
(Average movement 6%)



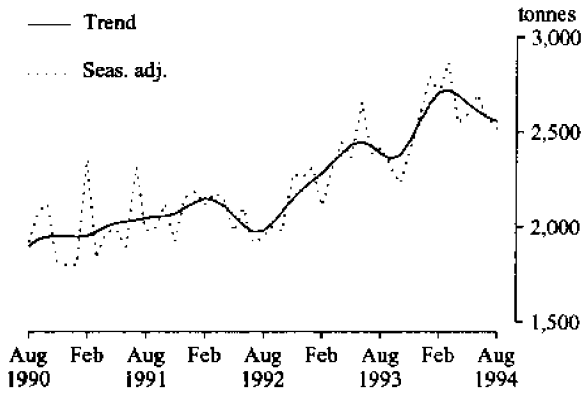
**M10. COTTON WOVEN FABRIC(f)**



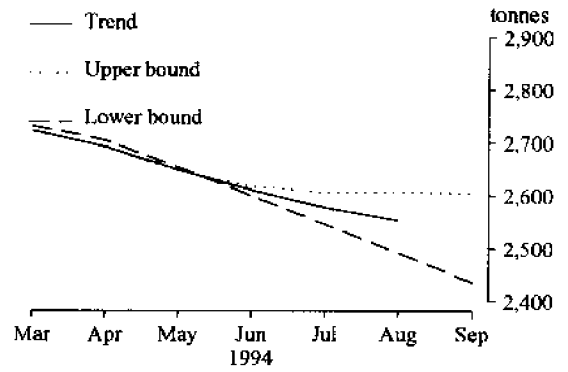
**M10. COTTON WOVEN FABRIC**  
(Average movement 9%)



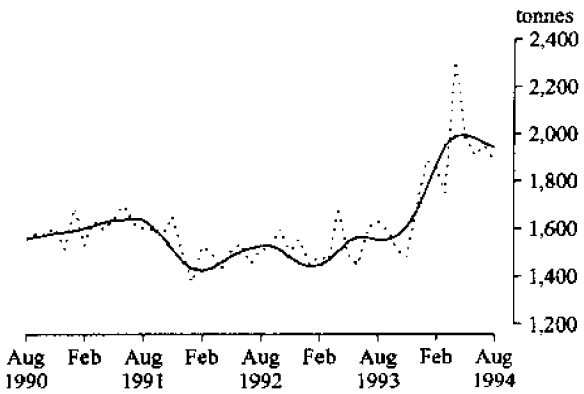
**M11. COTTON YARN(f)**



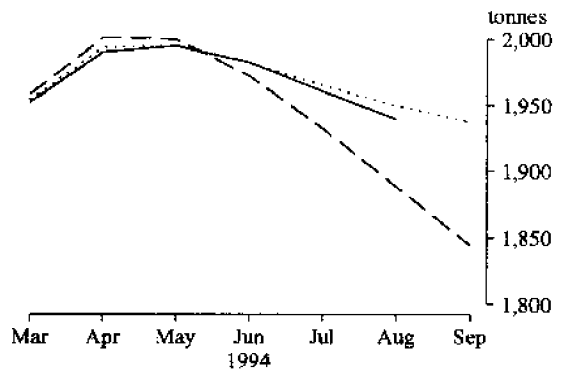
**M11. COTTON YARN  
(Average movement 8%)**



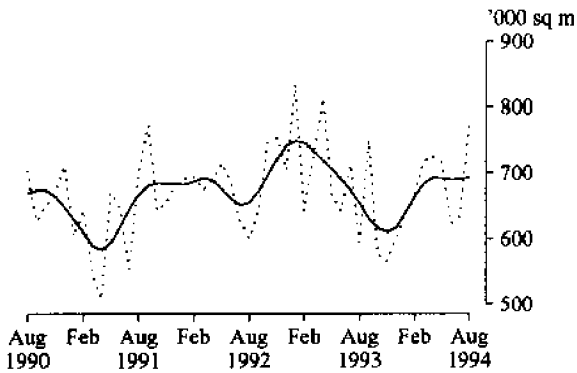
**M12. WOOL YARN(f)**



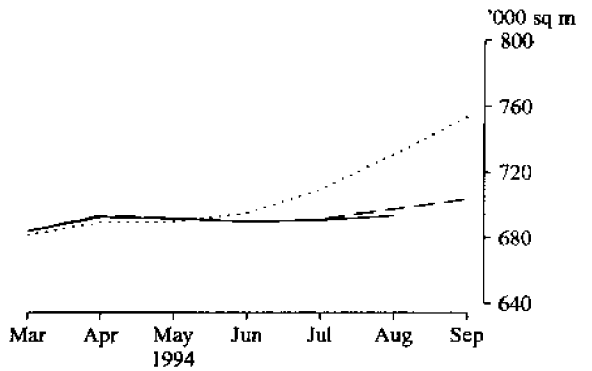
**M12. WOOL YARN  
(Average movement 6%)**



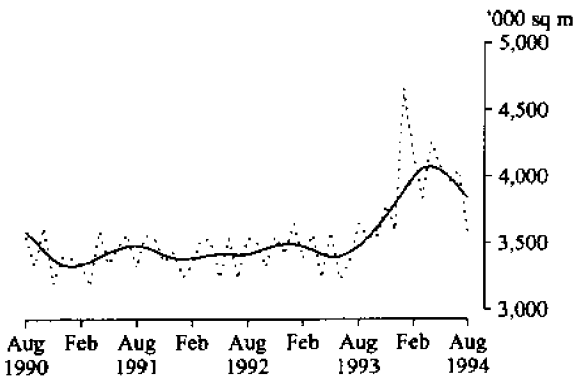
**M13. WOOL WOVEN FABRIC(f)**



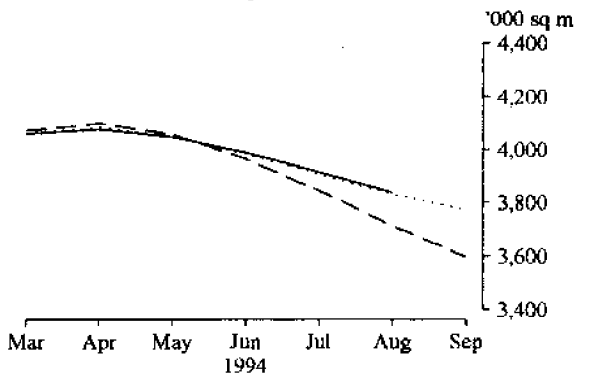
**M13. WOOL WOVEN FABRIC  
(Average movement 8%)**



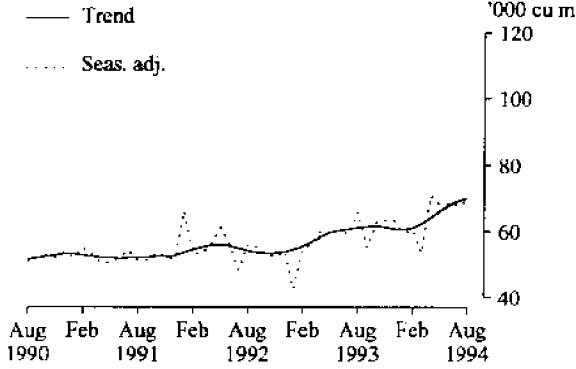
**M14. TEXTILE FLOOR COVERINGS**



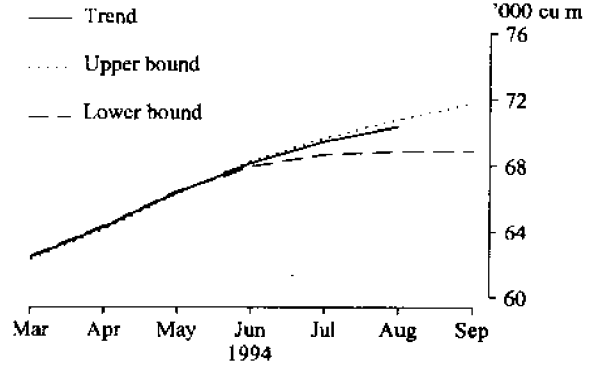
**M14. TEXTILE FLOOR COVERINGS  
(Average movement 6%)**



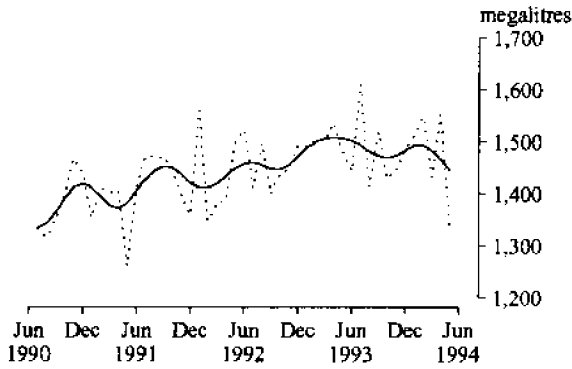
**M15. UNLAMINATED PARTICLE BOARD(g)**



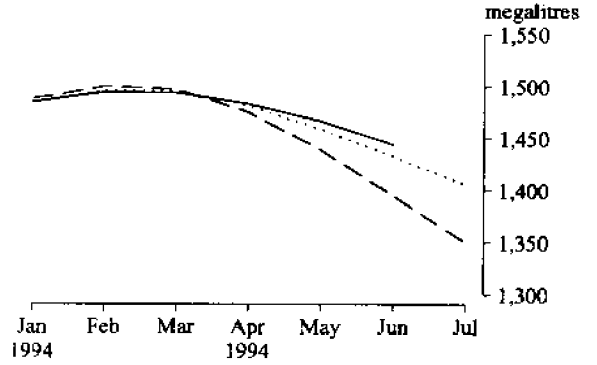
**M15. UNLAMINATED PARTICLE BOARD  
(Average movement 22%)**



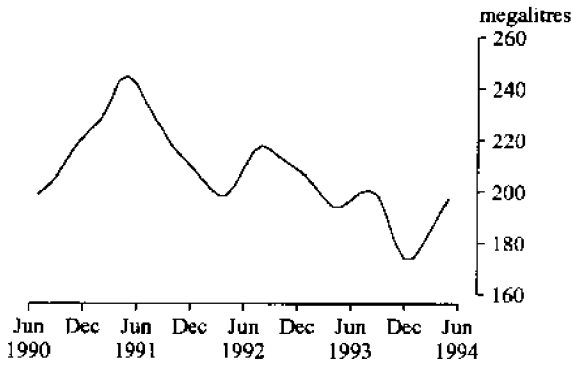
**M16. AUTOMOTIVE GASOLINE(h)**



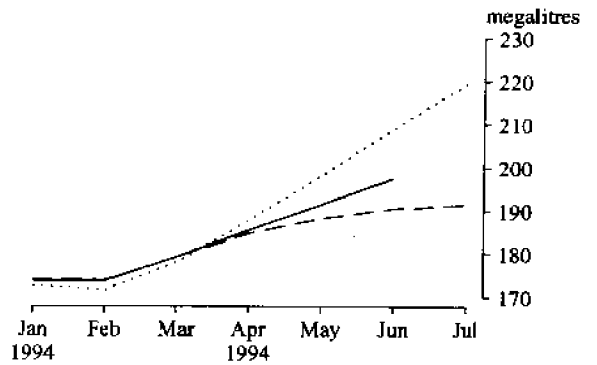
**M16. AUTOMOTIVE GASOLINE  
(Average movement 5%)**



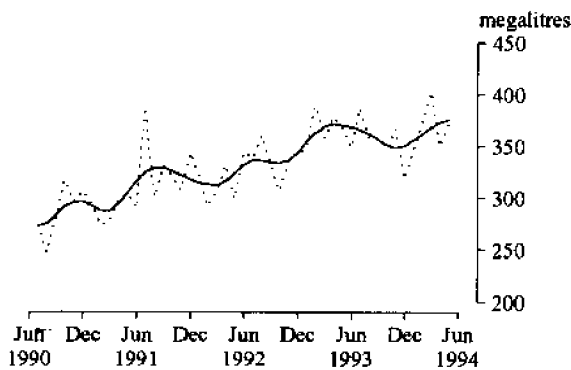
**M17. FUEL OIL**



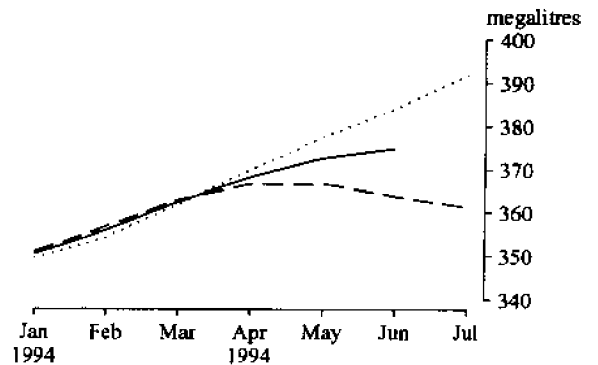
**M17. FUEL OIL  
(Average movement 16%)**



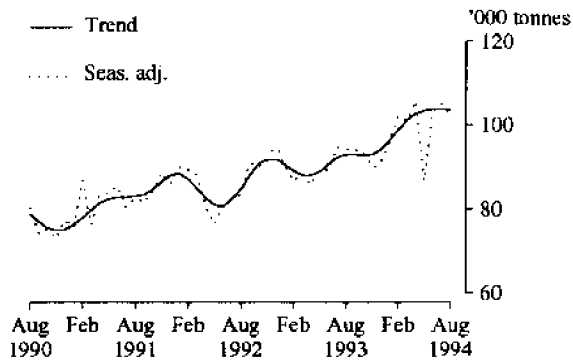
**M18. AVIATION TURBINE FUEL(h)**



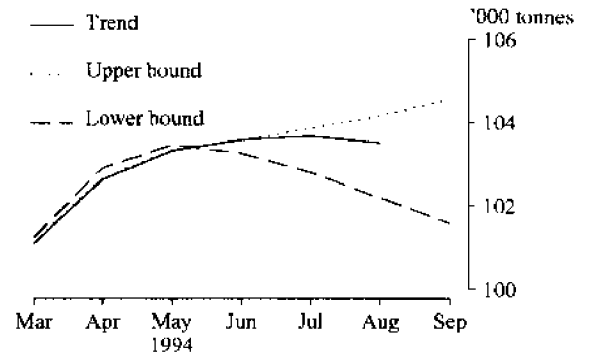
**M18. AVIATION TURBINE FUEL  
(Average movement 10%)**



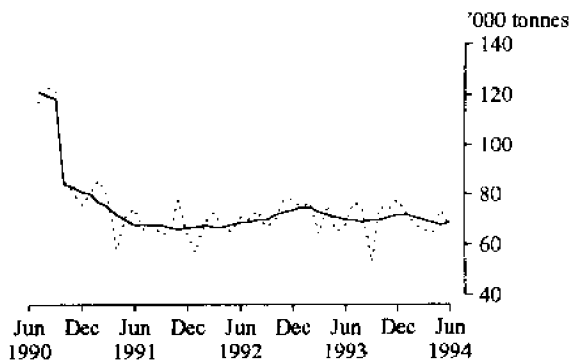
**M19. PLASTICS IN PRIMARY FORMS(I)**



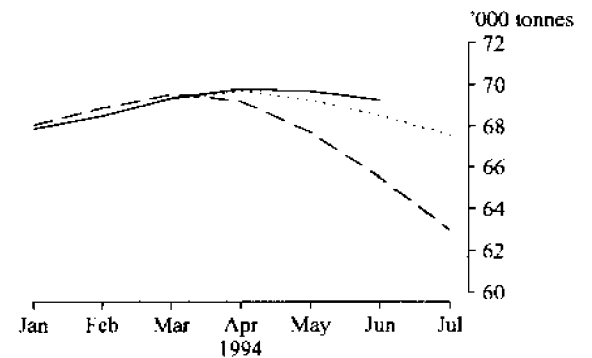
**M19. PLASTICS IN PRIMARY FORMS  
(Average movement 4%)**



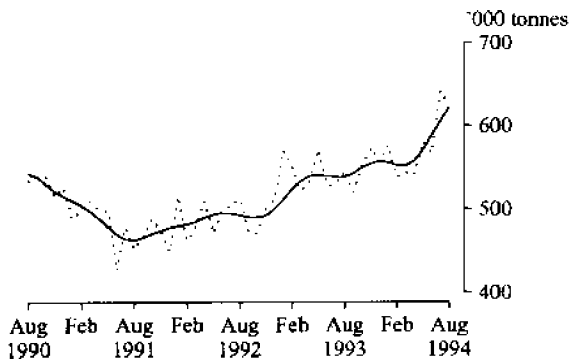
**M20. SULPHURIC ACID; OLEUM**



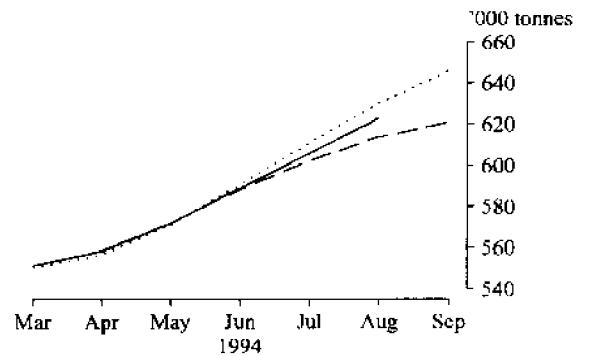
**M20. SULPHURIC ACID; OLEUM  
(Average movement 9%)**



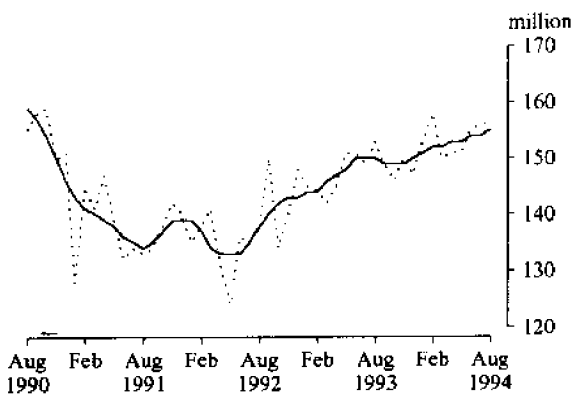
**M21. PORTLAND CEMENT**



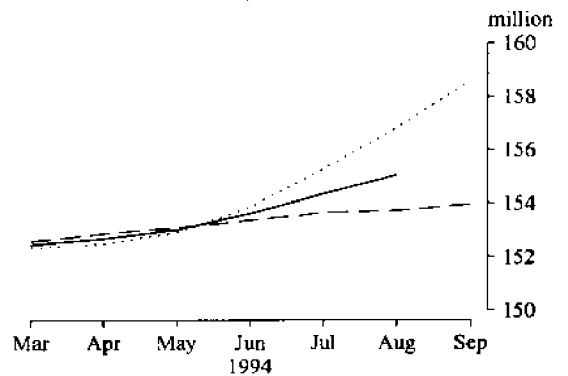
**M21. PORTLAND CEMENT  
(Average movement 5%)**



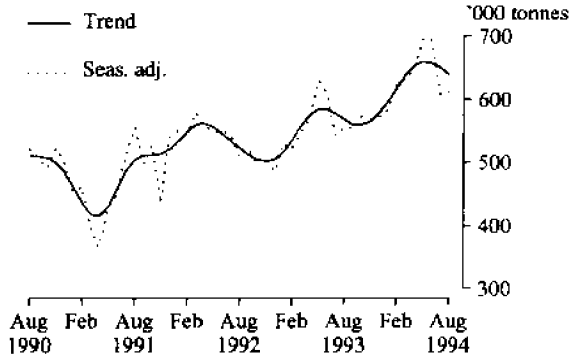
**M22. CLAY BRICKS**



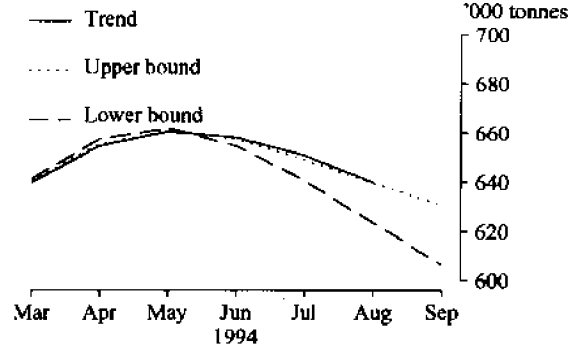
**M22. CLAY BRICKS  
(Average movement 4%)**



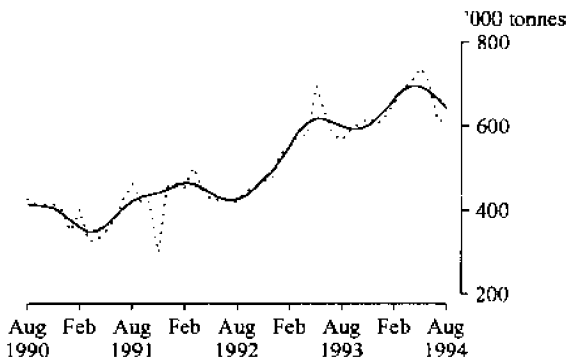
**M23. BASIC IRON, SPIEGELEISEN AND SPONGE IRON**



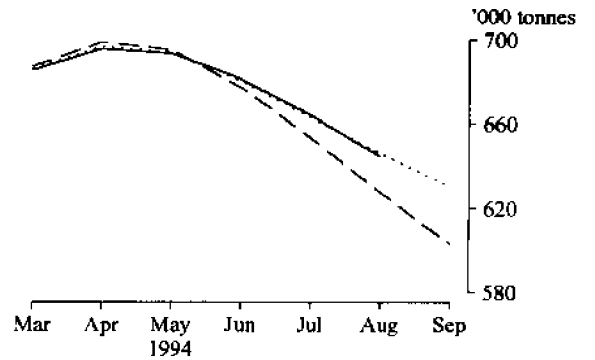
**M23. BASIC IRON, SPIEGELEISEN AND SPONGE IRON**  
(Average movement 5%)



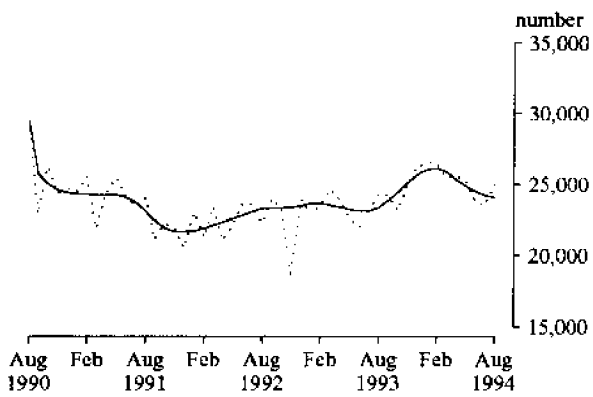
**M24. BLOOMS AND SLABS**



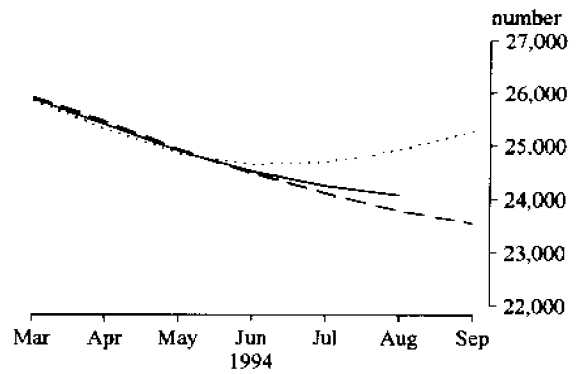
**M24. BLOOMS AND SLABS**  
(Average movement 6%)



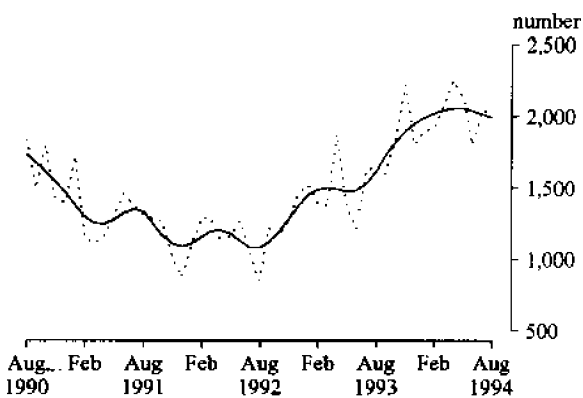
**M25. CARS AND STATION WAGONS**



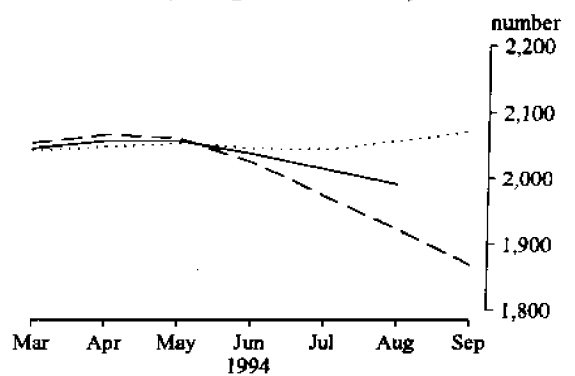
**M25. CARS AND STATION WAGONS**  
(Average movement 8%)



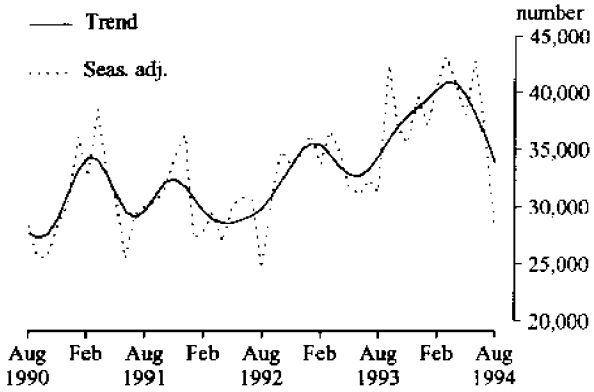
**M26. VEHICLES FOR GOODS AND MATERIALS(k)**



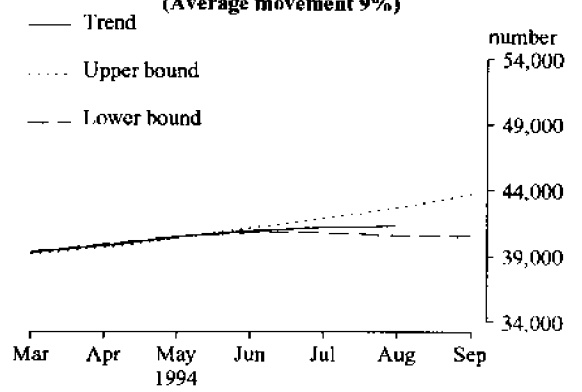
**M26. VEHICLES FOR GOODS AND MATERIALS**  
(Average movement 12%)



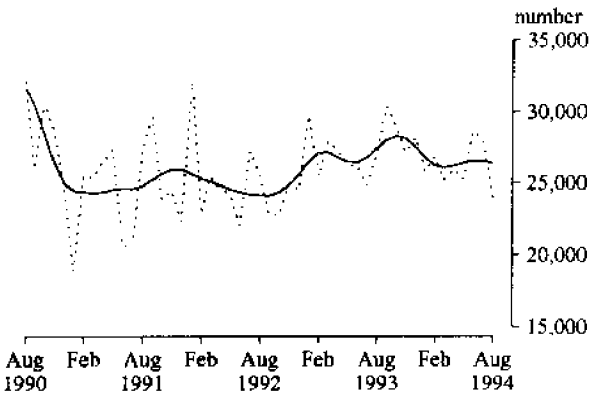
**M27. REFRIGERATORS, DOMESTIC**



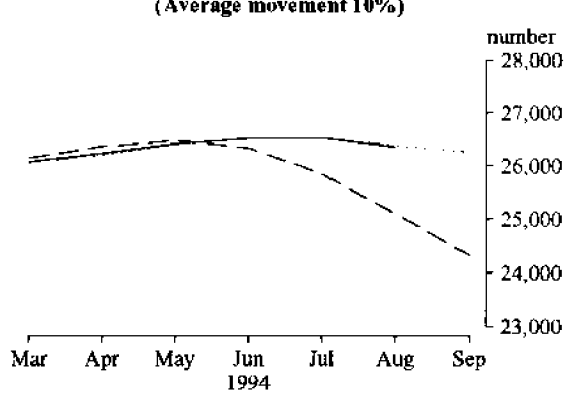
**M27. REFRIGERATORS, DOMESTIC**  
(Average movement 9%)



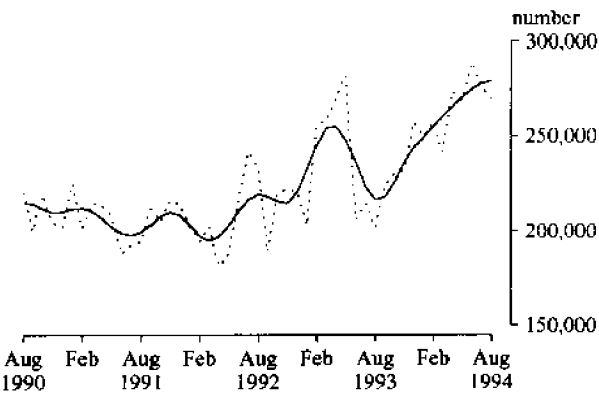
**M28. CLOTHES WASHING MACHINES, DOMESTIC**



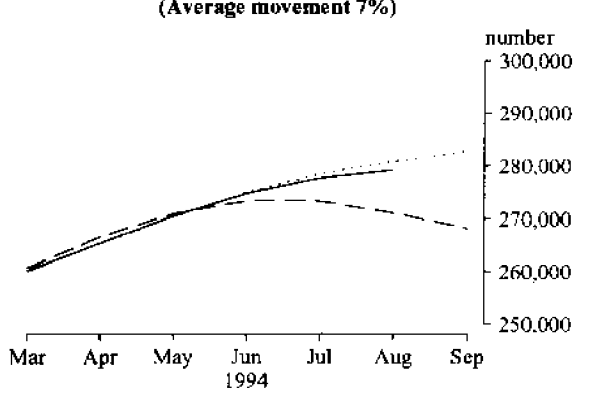
**M28. CLOTHES WASHING MACHINES, DOMESTIC**  
(Average movement 10%)



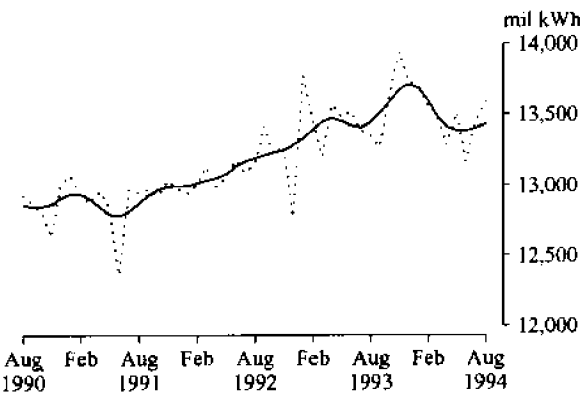
**M29. ELECTRIC MOTORS**



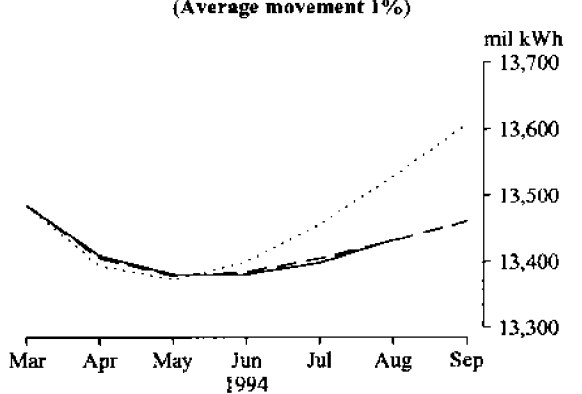
**M29. ELECTRIC MOTORS**  
(Average movement 7%)



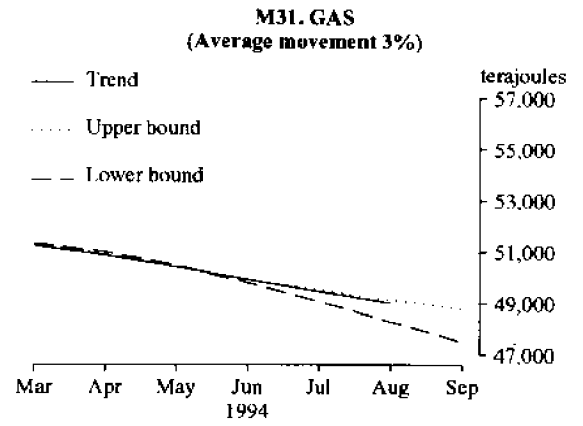
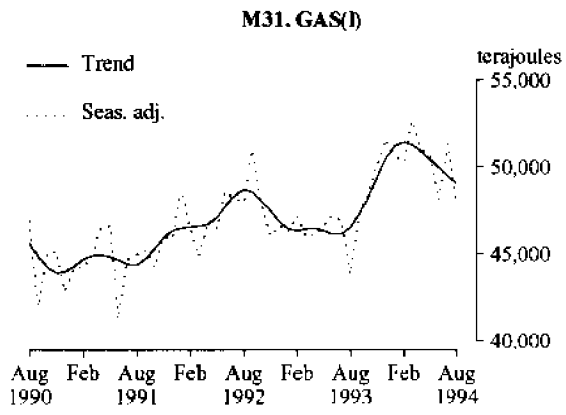
**M30. ELECTRICITY**

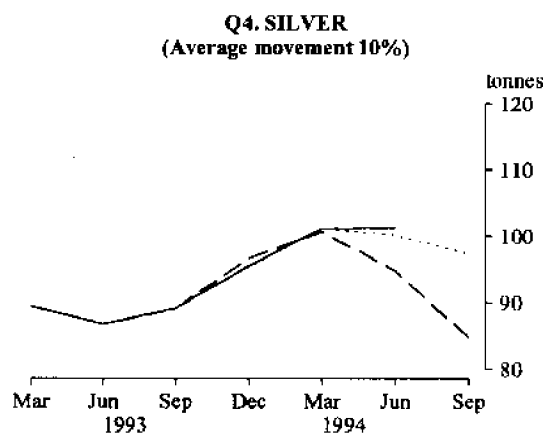
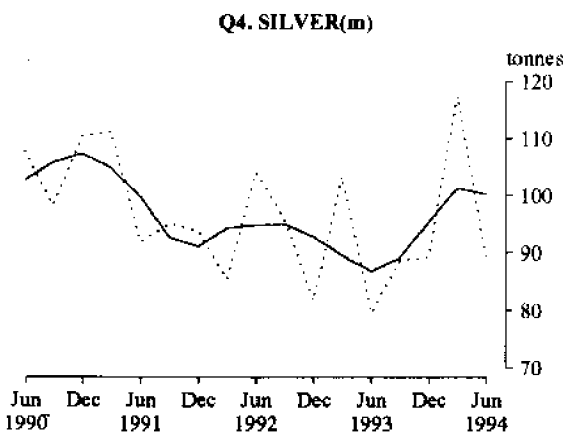
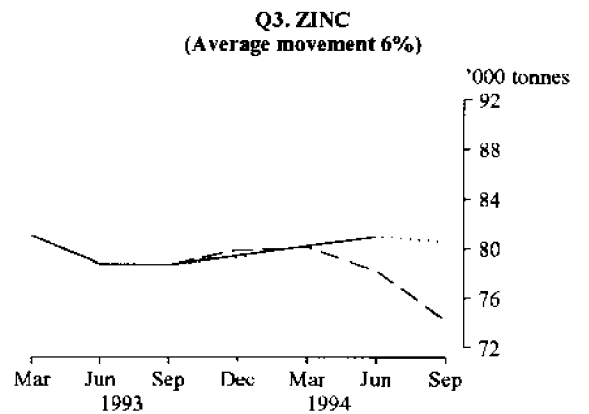
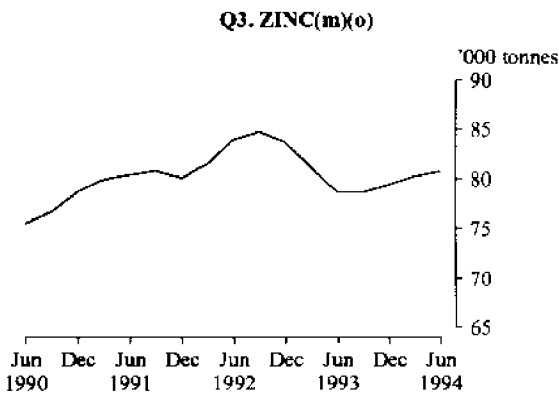
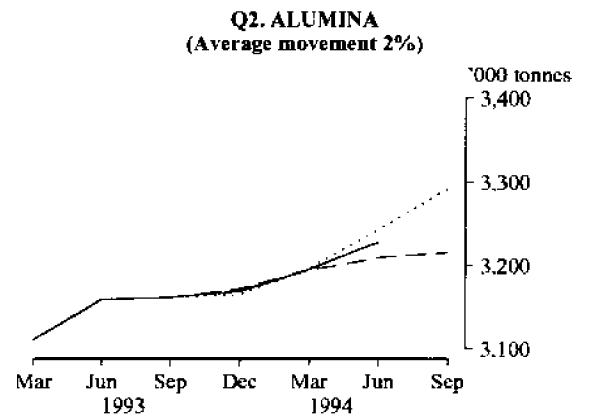
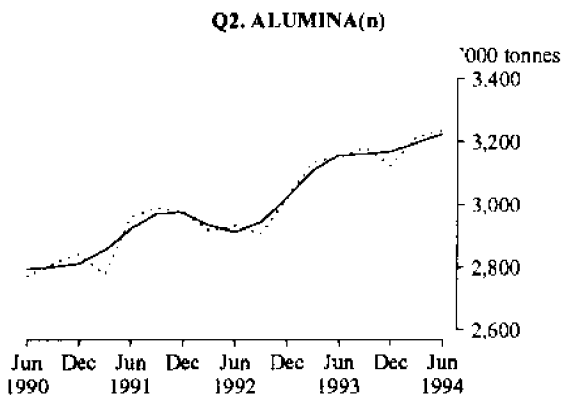
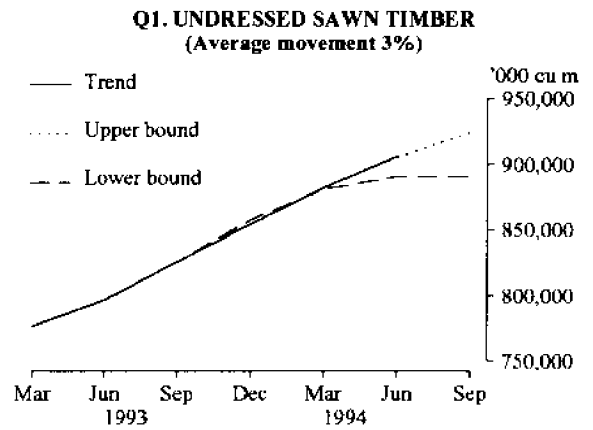
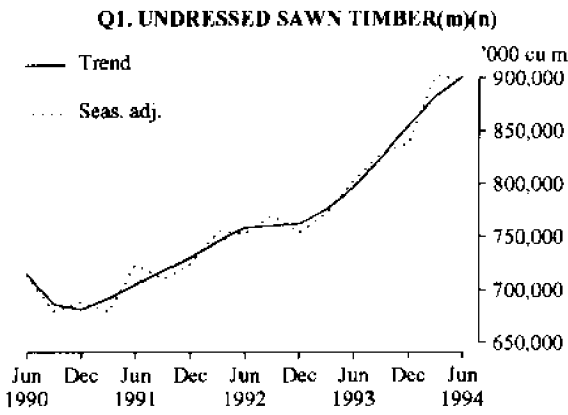


**M30. ELECTRICITY**  
(Average movement 1%)

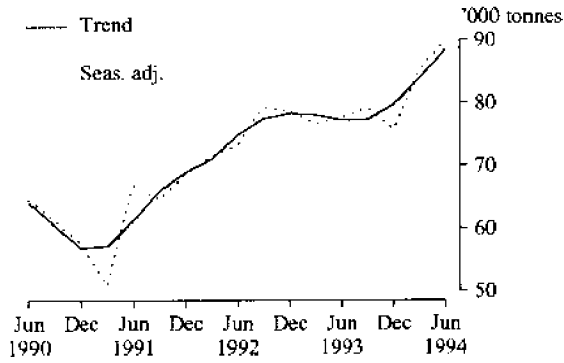




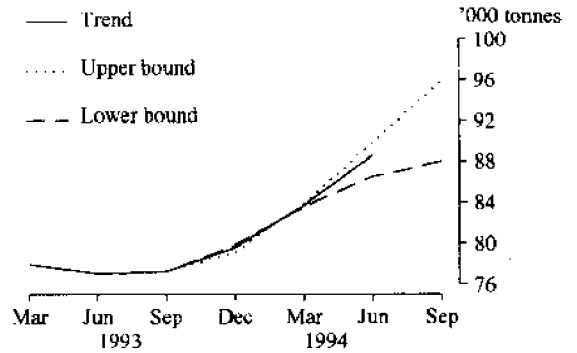




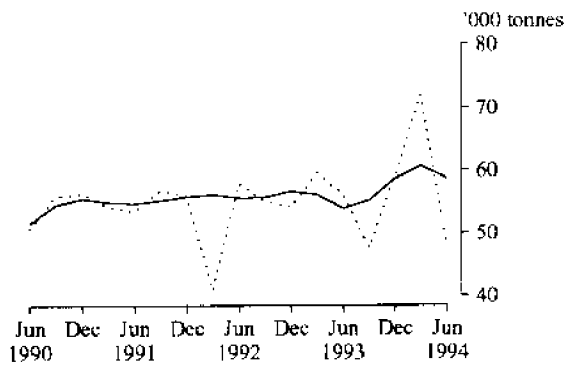
**Q5. COPPER**



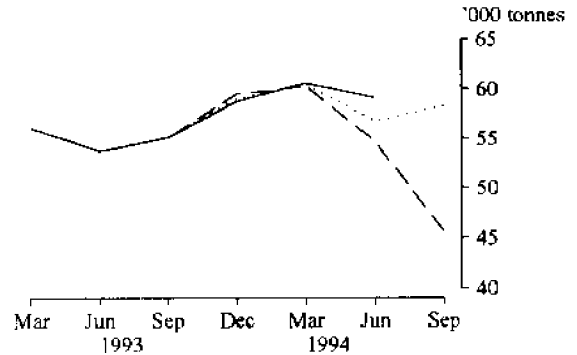
**Q5. COPPER**  
(Average movement 7%)



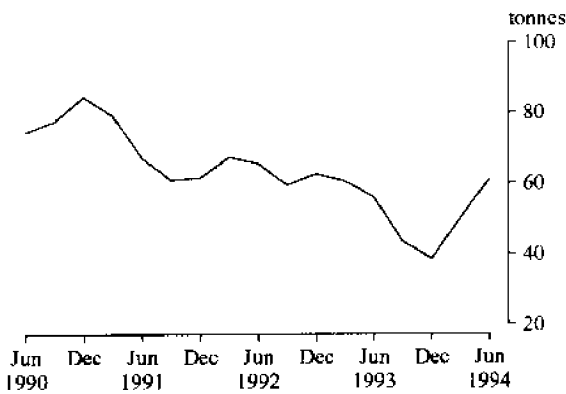
**Q6. LEAD(m)(p)**



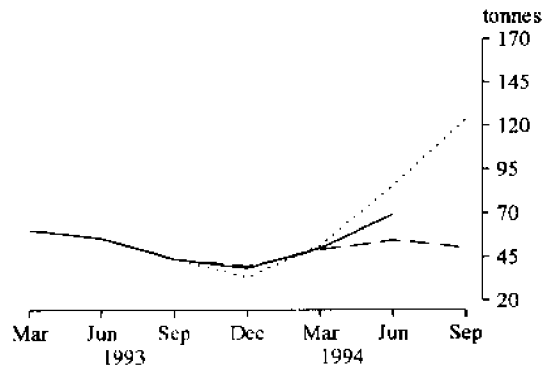
**Q6. LEAD**  
(Average movement 9%)



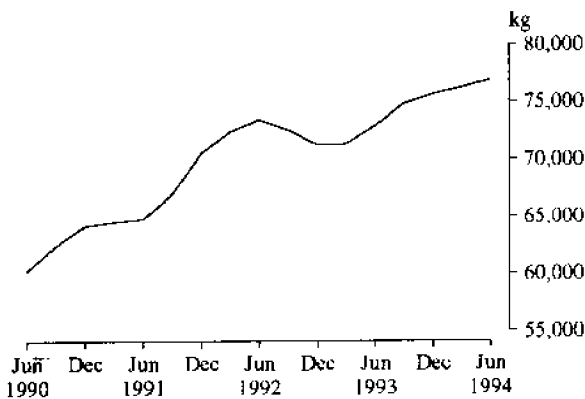
**Q7. TIN(m)(o)**



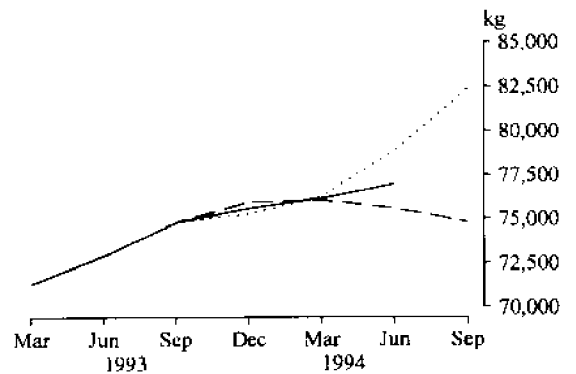
**Q7. TIN**  
(Average movement 46%)



**Q8. GOLD(m)(q)**



**Q8. GOLD**  
(Average movement 8%)



## PRODUCTION STATISTICS, AUSTRALIA, AUGUST 1994, PRELIMINARY

No. Item	Series	Unit	1993								1994								Percentage changes between latest month shown and-	
			Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	prev. month	same month prev. year							
M1. Red meat(a)	Orig.	tonnes	220,724	197,836	233,570	252,414	226,398	254,836	223,595	228,713	n.y.a.	2.3	2.7							
	S. adj.	"	222,939	243,718	242,443	230,464	238,612	252,291	222,876	242,510	n.y.a.	8.8	-1.3							
	Trend r	"	231,922	234,692	237,275	238,583	238,828	238,637	238,403	237,243	n.y.a.	-0.5	-1.2							
M2. Chicken meat(b)	Orig.	"	43,143	37,617	36,613	41,323	41,301	39,063	42,313	41,225	n.y.a.	-2.6	3.8							
	S. adj.	"	41,997	36,290	37,996	41,005	39,837	40,578	41,049	39,717	n.y.a.	-3.2	5.6							
	Trend r	"	38,646	38,963	39,303	39,622	39,924	40,251	40,480	40,842	n.y.a.	0.9	6.9							
M3. Cheese(c)	Orig. r	"	24,396	22,544	18,186	19,834	18,171	16,283	8,995	n.y.a.	n.y.a.	-44.8	3.9							
	S. adj. r	"	18,193	19,126	18,831	21,470	21,841	26,748	18,094	n.y.a.	n.y.a.	-32.4	5.5							
	Trend r	"	18,298	19,133	20,105	21,065	21,796	22,251	22,408	n.y.a.	n.y.a.	0.7	25.3							
M4. Butter(c)	Orig. r	"	17,975	14,978	11,755	12,158	9,103	6,917	7,200	n.y.a.	n.y.a.	4.1	37.1							
	S. adj. r	"	12,647	12,430	12,037	12,820	12,010	11,714	12,242	n.y.a.	n.y.a.	4.5	19.1							
	Trend r	"	12,312	12,369	12,340	12,278	12,198	12,120	12,018	n.y.a.	n.y.a.	-0.8	15.5							
M5. Chocolate base confectionery	Orig. r	"	9,547	8,390	9,405	9,561	7,417	8,753	9,267	8,845	10,864	22.8	2.1							
	S. adj. r	"	9,602	15,892	9,362	8,409	8,200	8,680	8,847	8,717	9,016	3.4	-2.8							
	Trend r	"	9,552	9,353	9,067	8,804	8,646	8,615	8,656	8,730	8,822	1.1	-2.8							
M6. Other confectionery	Orig. r	"	5,548	3,342	5,583	5,825	4,707	5,722	6,292	5,998	7,294	21.6	15.9							
	S. adj. r	"	5,766	6,388	5,981	5,477	5,774	5,748	5,923	5,642	5,973	5.9	12.6							
	Trend r	"	5,953	5,971	5,920	5,840	5,782	5,762	5,771	5,790	5,843	0.9	7.2							
M7. Beer(d)	Orig.	mil litres	184	151	134	164	126	r 131	125	n.p.	n.p.	-6.0	-3.1							
	S. adj.	"	145	160	146	151	134	r 140	145	n.p.	n.p.	2.8	-2.6							
	Trend r	"	149	148	147	146	144	143	143	n.p.	n.p.	-1.4	-5.3							
M8. Tobacco and cigarettes(e)	Orig.	tonnes	1,877	1,001	2,070	2,240	1,382	2,164	2,171	2,419	2,395	-1.0	15.0							
	S. adj.	"	2,001	1,861	1,909	1,898	1,615	1,861	2,094	2,238	2,124	-5.1	9.7							
	Trend r	"	1,908	1,866	1,837	1,833	1,865	1,924	2,001	2,082	2,152	3.4	6.9							
M9. Man-made fibre woven fabric	Orig. r	'000 sq m	13,574	9,819	16,074	16,070	14,435	15,945	17,325	16,825	17,351	3.1	7.4							
	S. adj. r	"	14,538	16,880	15,568	14,740	15,127	15,340	15,798	16,035	16,426	2.4	4.5							
	Trend r	"	15,429	15,443	15,409	15,367	15,375	15,477	15,664	15,870	16,166	1.9	3.4							
M10. Cotton Woven fabric(f)	Orig.	"	3,740	1,619	4,180	4,797	3,862	4,414	4,874	r 4,157	4,534	9.1	7.0							
	S. adj.	"	4,339	4,105	4,138	4,465	3,688	4,265	4,413	r 3,497	4,293	22.8	4.0							
	Trend r	"	4,130	4,175	4,189	4,176	4,134	4,095	4,069	4,052	4,035	-0.4	2.2							
M11. Cotton yarn(f)	Orig.	tonnes	2,306	1,583	2,550	3,081	2,422	2,612	3,201	2,736	2,818	3.0	11.0							
	S. adj.	"	2,588	2,793	2,698	2,869	2,547	2,594	2,699	2,568	2,520	-1.9	4.2							
	Trend r	"	2,556	2,653	2,712	2,723	2,692	2,648	2,610	2,577	2,553	-0.9	7.0							
M12. Wool yarn(f)	Orig.	"	1,421	1,113	1,830	1,894	1,954	2,141	2,040	r 2,011	2,185	8.7	20.1							
	S. adj.	"	1,676	1,889	1,856	1,750	2,309	1,984	1,908	r 1,948	1,883	-3.3	15.4							
	Trend r	"	1,676	1,770	1,873	1,952	1,990	1,995	1,983	1,961	1,940	-1.1	25.0							
M13. Wool woven fabric(f)	Orig.	'000 sq m	544	369	725	832	636	735	629	r 636	885	39.0	39.7							
	S. adj.	"	601	637	665	719	725	716	623	r 634	774	22.0	30.0							
	Trend r	"	617	639	665	684	693	692	690	691	693	0.4	6.2							
M14. Textile floor coverings	Orig.	"	3,429	2,513	4,059	4,064	3,822	4,366	r 4,046	r 4,000	4,086	2.1	1.2							
	S. adj.	"	3,589	4,660	4,167	3,836	4,255	4,075	r 3,963	r 4,047	3,582	-11.5	-1.6							
	Trend r	"	3,796	3,893	3,993	4,061	4,076	4,048	3,990	3,916	3,838	-2.0	10.5							
M15. Unlaminated particle board(g)	Orig.	'000 cu m	55	32	57	67	64	70	73	66	78	19.0	15.5							
	S. adj. r	"	63	60	60	53	71	68	69	68	69	2.3	5.3							
	Trend r	"	61	61	61	62	64	66	68	69	70	1.3	15.2							
M16. Automotive gasoline(h)	Orig.	megalitres	1,480	1,610	1,425	1,572	1,358	1,591	1,338	n.y.a.	n.y.a.	-15.9	10.0							
	S. adj.	"	1,446	1,487	1,512	1,548	1,432	1,553	1,334	n.y.a.	n.y.a.	-14.1	10.0							
	Trend r	"	1,475	1,485	1,494	1,494	1,483	1,466	1,444	n.y.a.	n.y.a.	-1.5	-4.6							

For footnotes see end of tables

## PRODUCTION STATISTICS, AUSTRALIA, AUGUST 1994, PRELIMINARY

No. Item	Series	Unit	1993									Percentage changes between latest month shown and-	
			1994									prev. month	same month prev. year
			Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.		
M17. Fuel oil(h)	Orig.	megalitres	167	195	152	175	192	175	198	n.y.a.	n.y.a.	13.1	11.2
	S. adj.	"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Trend r	"	180	174	174	179	186	191	198	n.y.a.	n.y.a.	3.7	2.1
M18. Aviation turbine fuel(h)	Orig.	"	383	355	329	362	348	353	342	n.y.a.	n.y.a.	-3.1	-0.6
	S. adj.	"	367	319	344	374	403	350	372	n.y.a.	n.y.a.	6.2	0.5
	Trend r	"	349	350	356	362	368	373	375	n.y.a.	n.y.a.	0.5	1.4
M19. Plastics in primary forms(i)	Orig. r	'000 tonnes	84.5	82.8	96.2	106.0	100.9	86.9	100.3	105.4	113.8	8.0	15.2
	S. adj. r	"	90.9	95.8	102.0	100.9	105.5	86.7	103.2	104.9	102.4	-2.4	8.9
	Trend r	"	94.0	96.1	98.8	101.1	102.6	103.3	103.6	103.7	103.5	-0.2	11.5
M20. Sulphuric acid; oleum	Orig.	"	82.7	82.4	71.3	72.5	74.8	71.3	68.9	n.p.	n.p.	-2.1	-8.0
	S. adj.	"	71.7	67.9	65.9	63.5	73.9	67.0	70.2	n.p.	n.p.	6.1	-8.1
	Trend r	"	71.3	69.9	68.5	67.9	68.5	69.4	69.8	n.p.	n.p.	1.4	-1.4
M21. Portland cement	Orig.	"	539	407	497	564	515	625	592	659	661	0.4	15.6
	S. adj.	"	556	577	538	544	541	581	567	641	625	-2.5	14.5
	Trend r	"	558	556	552	552	558	572	589	606	623	2.8	15.7
M22. Clay bricks	Orig.	million	134.7	98.3	150.3	172.6	143.8	166.9	161.1	156.3	174.8	11.9	5.3
	S. adj.	"	147.0	152.9	157.7	150.3	150.9	150.9	154.7	156.1	155.6	-0.4	1.4
	Trend r	"	150.3	151.2	152.0	152.4	152.7	153.0	153.6	154.4	155.1	0.5	3.3
M23. Basic iron, spiegeleisen and sponge iron	Orig.	'000 tonnes	591	582	556	607	628	652	646	643	649	0.9	10.4
	S. adj.	"	573	582	624	634	649	696	696	609	613	0.6	10.4
	Trend r	"	578	596	618	640	655	660	658	651	640	-1.7	12.8
M24. Blooms and Slabs(j)	Orig.	"	638	613	590	647	667	681	658	661	680	2.9	11.0
	S. adj.	"	604	624	658	691	705	738	704	611	618	1.2	9.1
	Trend r	"	619	641	665	686	696	694	681	664	644	-3.0	7.6
M25. Cars and station wagons	Orig.	number	21,120	11,978	26,012	29,548	21,375	28,792	26,159	25,221	29,115	15.4	5.3
	S. adj.	"	26,224	26,577	26,396	25,458	25,630	25,235	23,846	23,510	24,982	6.3	2.6
	Trend r	"	25,656	26,034	26,133	25,885	25,393	24,899	24,519	24,237	24,066	-0.7	3.0
M26. Vehicles for goods and materials(k)	Orig.	"	1,549	803	1,857	2,358	1,949	2,401	2,074	2,119	2,385	12.6	27.1
	S. adj.	"	1,800	1,912	1,927	2,070	2,251	2,132	1,800	2,049	2,001	-2.3	21.2
	Trend r	"	1,951	1,991	2,026	2,045	2,055	2,056	2,038	2,014	1,991	-1.1	23.0
M27. Refrigerators, domestic	Orig.	'000	37.2	35.8	41.6	49.4	34.4	38.9	38.1	31.2	30.8	-1.3	-5.2
	S. adj.	"	39.7	37.1	40.6	43.2	40.7	38.0	42.9	36.1	28.1	-22.1	-9.8
	Trend r	"	38.7	39.4	40.3	40.9	40.8	39.8	38.1	36.1	33.9	-6.2	-1.6
M28. Clothes washing machines, domestic	Orig.	"	25.3	11.8	26.4	29.4	24.0	25.2	29.4	30.2	30.0	-0.6	-7.2
	S. adj.	"	28.2	25.8	26.8	25.2	26.0	25.3	28.6	27.9	24.0	-14.1	-11.1
	Trend r	"	27.5	26.7	26.2	26.1	26.2	26.4	26.5	26.5	26.4	-0.6	-3.9
M29. Electric motors	Orig.	"	238	161	256	279	255	265	289	271	277	2.0	38.0
	S. adj.	"	257	249	257	241	273	269	289	276	269	-2.5	33.5
	Trend r	"	244	250	255	260	265	271	275	278	279	0.5	29.2
M30. Electricity	Orig.	mil k Wh	13,456	13,171	12,517	13,489	12,509	13,785	13,921	14,603	14,749	1.0	2.8
	S. adj.	"	13,723	13,697	13,559	13,487	13,279	13,510	13,163	13,447	13,595	1.1	1.8
	Trend r	"	13,712	13,682	13,593	13,485	13,409	13,381	13,381	13,399	13,433	0.3	-0.1
M31. Gas(l)	Orig.	terrajoules	43,736	39,975	40,478	47,002	46,223	55,116	57,719	62,375	60,101	-3.6	10.0
	S. adj.	"	51,538	50,670	50,266	52,673	50,991	50,669	48,074	51,310	47,861	-6.7	9.3
	Trend r	"	50,502	51,188	51,411	51,233	50,874	50,422	49,934	49,458	49,004	-0.9	5.4

For footnotes see end of tables

## PRODUCTION STATISTICS, AUSTRALIA, JUNE QUARTER 1994, PRELIMINARY

No. Item	Series	Unit	1992				1993				1994		Percentage changes between latest quarter shown and:	
			June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	prev. quarter	same quarter prev. year	
Q1. Undressed sawn Timber(m)(n)	Orig.	'000 cu m	779	795	766	709	831	r 856	r 850	r 830	928	11.8	11.7	
	S. adj.	"	753	771	754	772	803	r 829	r 838	r 902	897	-0.6	11.7	
	Trend r	"	759	761	763	777	797	826	855	882	902	2.2	13.1	
Q2. Alumina(m)	Orig.	'000 tonnes	2,907	2,948	3,054	3,094	3,125	3,225	3,154	3,172	3,209	1.2	2.7	
	S. adj.	"	2,935	2,908	3,025	3,137	3,153	3,183	3,124	3,216	3,237	0.7	2.7	
	Trend r	"	2,914	2,946	3,023	3,111	3,159	3,162	3,170	3,196	3,226	0.9	2.1	
Q3. Zinc(m)(o)	Orig.	"	88	87	82	76	88	73	79	82	81	-1.2	-8.0	
	S. adj.	"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
	Trend r	"	84	85	84	81	79	79	79	80	81	0.6	2.5	
Q4. Silver(m)	Orig.	tonnes	122	95	87	80	93	88	95	r 91	104	14.3	11.8	
	S. adj.	"	104	96	82	103	79	89	89	r 118	89	-24.3	11.9	
	Trend r	"	95	95	93	89	87	89	96	101	100	-1.0	15.6	
Q5. Copper(m)(o)	Orig.	'000 tonnes	71	84	82	71	75	84	79	79	87	10.1	16.0	
	S. adj.	"	73	79	78	77	78	79	76	85	90	5.8	16.1	
	Trend r	"	75	77	78	78	77	77	80	84	88	5.7	14.7	
Q6. Lead(m)(p)	Orig.	"	64	59	56	47	62	51	61	57	53	-7.0	-14.5	
	S. adj.	"	58	55	54	60	56	48	59	72	48	-33.3	-14.5	
	Trend r	"	56	56	57	56	54	55	59	61	59	-3.2	9.1	
Q7. Tin(m)(o)	Orig.	tonnes	67	75	37	73	73	13	63	18	92	411.1	26.0	
	S. adj.	"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
	Trend r	"	66	59	63	61	56	44	39	50	61	22.0	9.1	
Q8. Gold(m)(q)	Orig.	kg	72,363	75,608	69,505	69,676	73,399	77,826	73,549	75,027	78,696	4.9	7.2	
	S. adj.	"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
	Trend r	"	73,477	72,573	71,285	71,329	72,925	74,814	75,662	76,209	76,884	0.9	5.4	

(a) Includes beef, veal, mutton, lamb, pigmeat and buffalo meat produced in the Northern Territory. (b) Chicken meat is shown in dressed weight of whole birds pieces and giblets. (c) Source: Australian Dairy Corporation. (d) Includes ale and stout. Excludes beverages with alcohol content of less than 1.15 per cent. (e) Source: Australian Tobacco Marketing Committee. (f) Includes mixtures predominantly of the fibre named. (g) Particle boards and similar boards of wood or other ligneous material. Includes boards for subsequent conversion to other purposes. Excludes laminated. Seasonally adjusted estimates will not be published until a longer time span of data are available to provide more reliable seasonal factors. (h) Produced by Australian refineries from imported and indigenous petroleum. Source: ABARE. (i) Includes liquid, paste, powder, granules, flakes, blocks, irregular shapes, lumps and similar forms. Seasonally adjusted estimates will not be published until a longer time span of data are available to provide more reliable seasonal factors. (j) From continuous casting. (k) Includes utilities, panel vans and prime movers for semi-trailers. (l) Available for issue through mains. Includes natural gas. (m) Source: ABARE. (n) Expressed in terms of green off saw volumes. (o) Primary origin only. (p) includes lead content of lead from primary sources. (q) From primary and secondary sources.

## SENSITIVITY ANALYSIS

Where seasonally adjusted series are known to be highly erratic, an analysis of how sensitive the current trend estimates are to additional data can be useful. Such analysis is referred to as 'sensitivity analysis'.

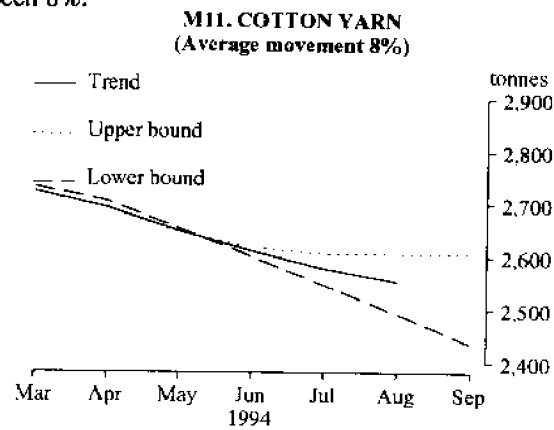
Readers should exercise care when interpreting the latest month's trend estimates because they will be revised when the next month's seasonally adjusted estimates become available. For further information, see Explanatory Notes 7 and 8.

The graph below presents the effect of two possible scenarios on the current and previous trend estimates:

**Upper bound** The September seasonally adjusted estimate of the production of cotton yarn, is higher than the August seasonally adjusted estimate by 8%.

**Lower bound** The September seasonally adjusted estimate of the production of cotton yarn, is lower than the August seasonally adjusted estimate by 8%.

The percentage change of 8% was chosen because average absolute percentage change for this series has been 8%.



## EXPLANATORY NOTES

### Introduction

1. This publication presents preliminary monthly and quarterly estimates for selected major indicators of production for Australia. A more extensive range of commodities will be published later in the series of ten *Manufacturing Production Bulletins* (8357.0 to 8363.0 and 8367.0 to 8369.0).

### Scope and coverage

2. Production statistics are not collected from single establishment manufacturing enterprises with fewer than four persons employed or from establishments predominantly engaged in non-manufacturing activities but which may carry out in a minor way some manufacturing. However, in general the contribution of these small producers to statistical aggregates is only marginal and data contained in this publication provide reliable information for the evaluation of movements in commodity production.

### Comparability with other estimates

3. The ABS publishes quarterly estimates of constant price manufacturing production in the publication *Quarterly Indexes of Industrial Production, Australia* (8125.0). These estimates are shown as index numbers and are derived mainly from estimates of manufacturers' sales and stocks.

4. The production statistics published in the series of ten *Manufacturing Production Bulletins* (8357.0 to 8363.0 and 8367.0 to 8369.0) referred to in paragraph 1 account, in total, for less than half of the output of the manufacturing sector, so differences may occur between the general tendency (if there is one) in these items and changes in the quarterly indexes of industrial production. The comment is even more applicable to the preliminary estimates for the major indicators of production shown in this publication.

## Seasonally adjusted and trend estimates

5. Seasonally adjusted statistics are shown for all the data items contained in this publication. In the seasonal adjustment, account has been taken not only of normal seasonal factors, but also where appropriate, of 'working day' effects (arising from the varying numbers of Sundays, Mondays, Tuesdays, etc. in the month) and the influence of Easter and Australia Day which may, in successive years, affect figures for different months. Details of the methods used in seasonally adjusting these series are available on request.

6. Seasonal adjustment procedures do not aim to remove the irregular or non-seasonal influences which may be present in any particular month, such as the effect of strikes, holiday shutdowns or other factors which vary with the prevailing demand for products. Irregular influences that are highly volatile can make it difficult to interpret the movement of the series even after seasonal adjustment.

7. The smoothing of seasonally adjusted series to create trend estimates is a means of reducing the impact of the irregular component of the series. The trend estimates have been derived by applying a 13-term Henderson weighted moving average to the seasonally adjusted series.

8. While this smoothing technique enables estimates of trend to be produced for the latest month, it does result in revisions to the estimates for the most recent months as data for subsequent months become available. Generally subsequent revisions become smaller and after 3 months have little impact on the series. There will also be revisions as a result of revisions to the original estimates and annual reviews of seasonal and 'working day' factors.

9. Users may wish to refer to the ABS Information Papers *A Guide to Smoothing Time Series - Estimates of Trend* (1316.0) and *Time Series Decomposition - An Overview* (1317.0) for more detailed information on smoothing of seasonally adjusted time series data.

## Related publications

10. Other ABS publications which may be of interest are:

*Manufacturing Production, Australia, Household Appliances and Electrical Equipment* (8357.0) - issued quarterly

*Manufacturing Production, Australia, Clothing and Footwear* (8358.0) - issued quarterly

*Manufacturing Production, Australia, Food, Drink, Tobacco, Stock and Poultry Food* (8359.0) - issued quarterly

*Manufacturing Production, Australia, Fibres, Yarns, Fabrics, Bedding and Floor Coverings* (8360.0) - issued quarterly

*Manufacturing Production, Australia, Building Materials and Fittings* (8361.0) - issued quarterly

*Manufacturing Production, Australia, Plastics, Rubber, Paints, Detergents and Industrial Chemicals* (8362.0) - issued quarterly

*Manufacturing Production, Australia, Transport Equipment* (8363.0) - issued quarterly

*Manufacturing Production, Australia, Metal Products* (8367.0) - issued quarterly

*Manufacturing Production, Australia, Energy Products* (8368.0) - issued quarterly

*Manufacturing Production, Australia, Wood and Wood Products* (8369.0) - issued quarterly

*Manufacturing Production, Australia: Principal Commodities Produced, 1989-90* (8365.0)

*Unpublished production data* is also available from the ABS Sydney office. Please contact Frank Orton on (02) 268 4245.

11. Current publications produced by the ABS are listed in the *Catalogue of Publications and Products, Australia* (1101.0). The ABS also issues, on Tuesdays and Fridays, a *Publications Advice* (1105.0) which lists publications to be released in the next few days. The Catalogue and Publications Advice are available from any ABS office.

## Symbols and other usages

n.y.a.	not yet available
r	figure or series revised since previous issue
n.a.	not available
n.p.	not publishable

