

**MANUFACTURING PRODUCTION, AUSTRALIA  
SEPTEMBER 1994, PRELIMINARY**

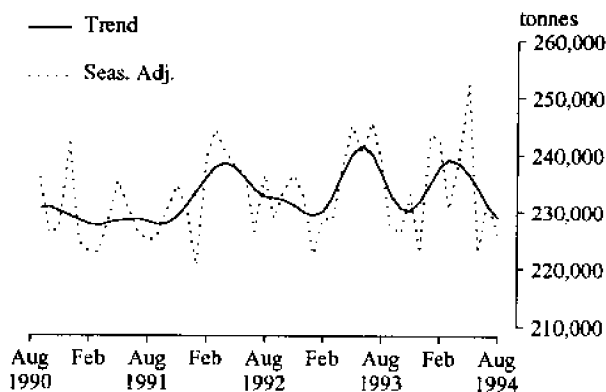
NOTES

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.

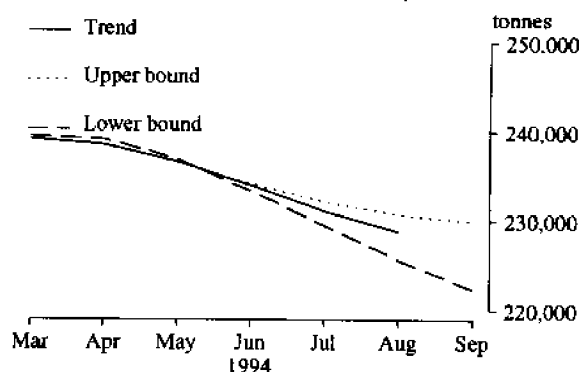
**IAN CASTLES**  
Australian Statistician

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

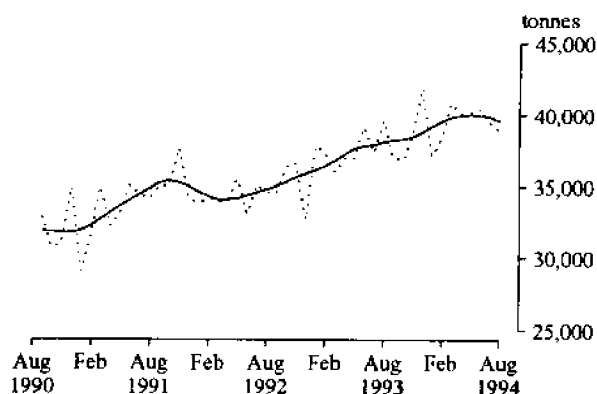
**M1. RED MEAT(a)**



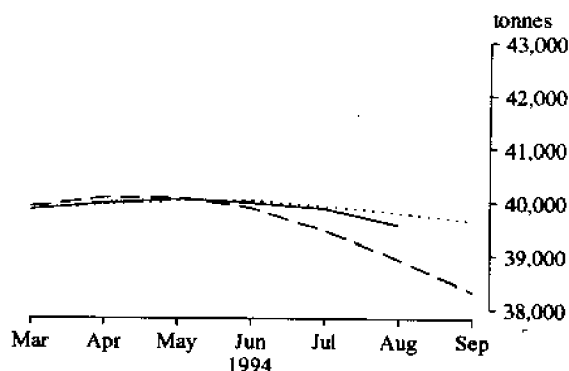
**M1. RED MEAT  
(Average movement 4%)**



**M2. CHICKEN MEAT(b)**



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

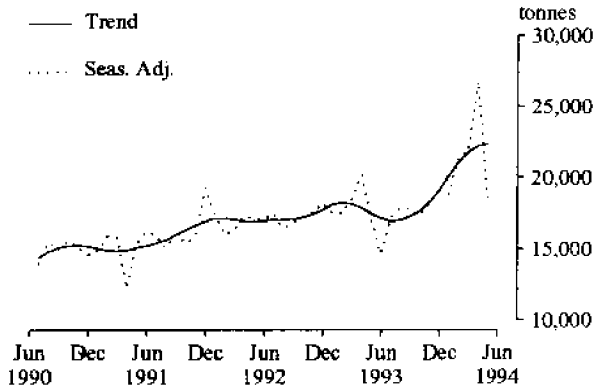


For footnotes see end of tables.

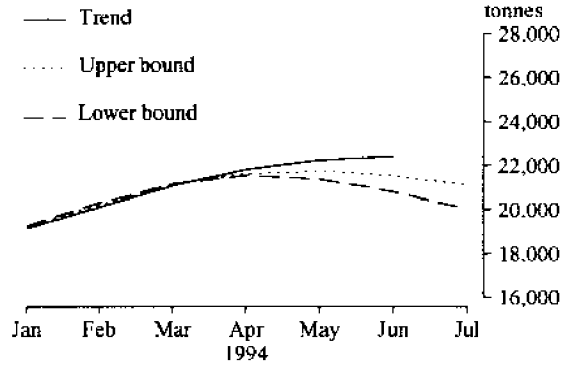
**INQUIRIES**

- . for further information about statistics in this publication and the availability of related unpublished statistics, contact Rod Smith on Melbourne (03) 615 7635 or any ABS office.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.

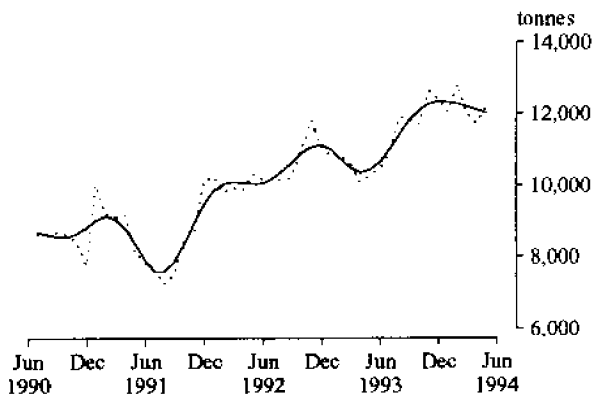
**M3. CHEESE(c)**



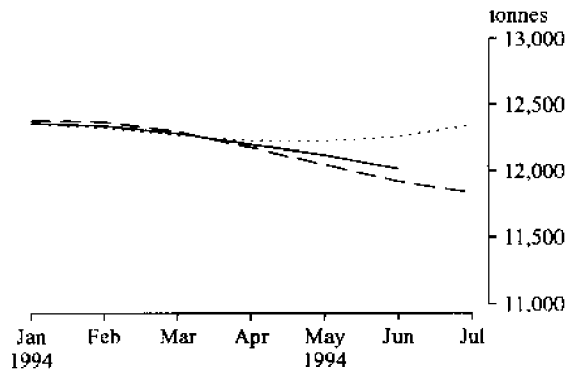
**M3. CHEESE**  
(Average movement 7%)



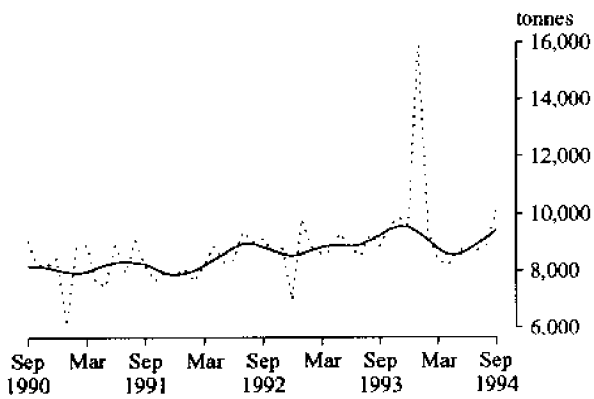
**M4. BUTTER(c)**



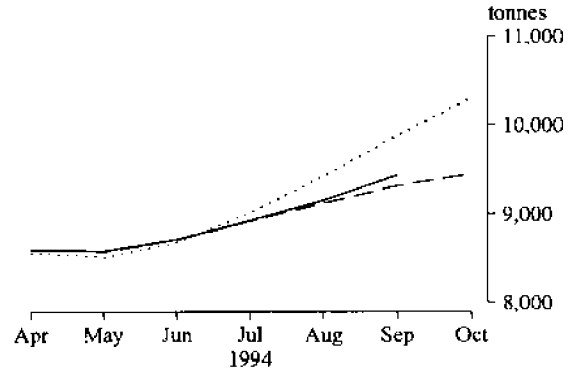
**M4. BUTTER**  
(Average movement 6%)



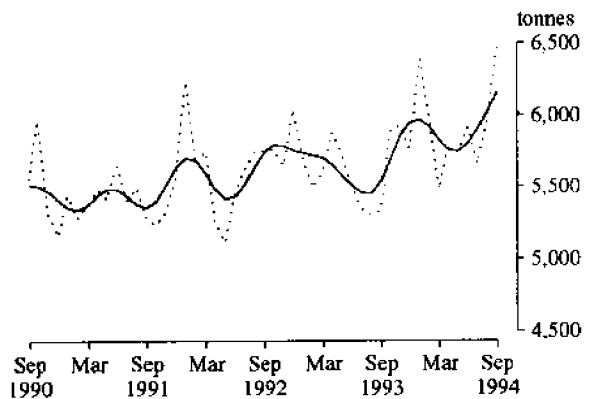
**M5. CHOCOLATE BASE CONFECTIONERY**



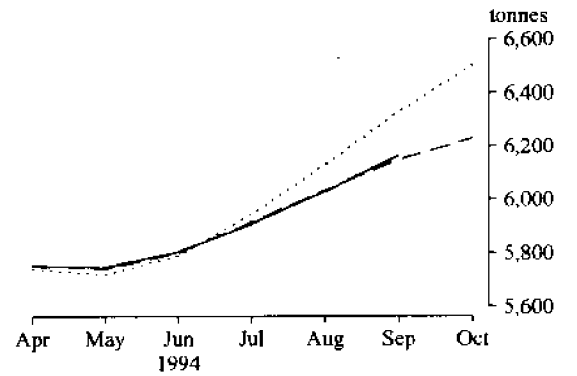
**M5. CHOCOLATE BASE CONFECTIONERY**  
(Average movement 7%)



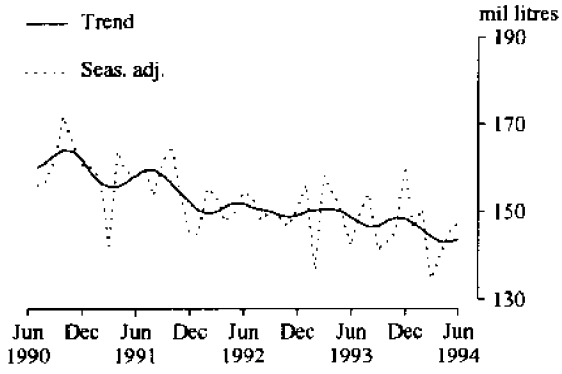
**M6. OTHER CONFECTIONERY**



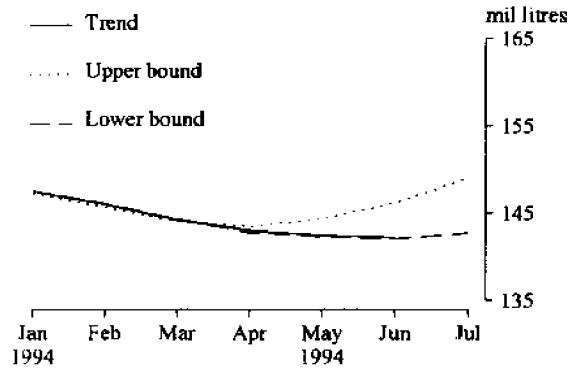
**M6. OTHER CONFECTIONERY**  
(Average movement 5%)



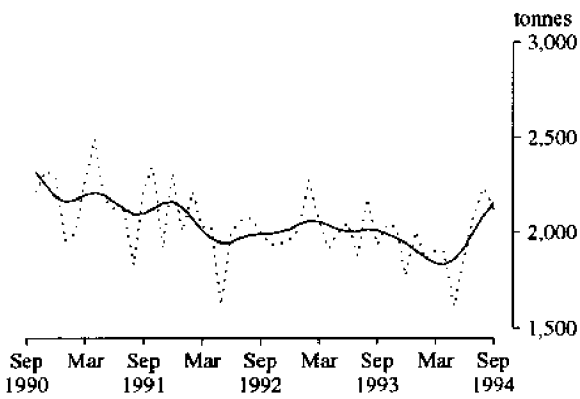
**M7. BEER(d)**



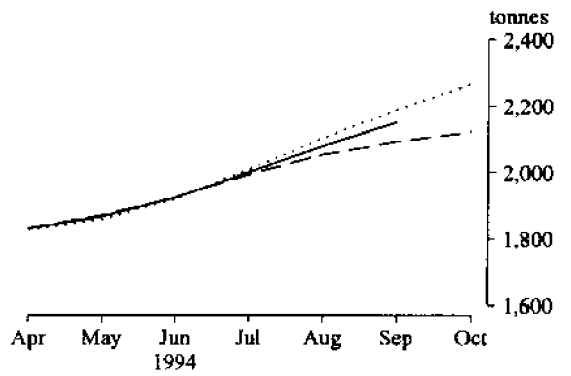
**M7. BEER  
(Average movement 7%)**



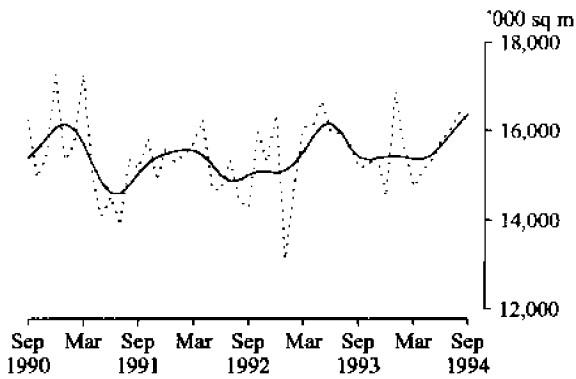
**M8. TOBACCO AND CIGARETTES(e)**



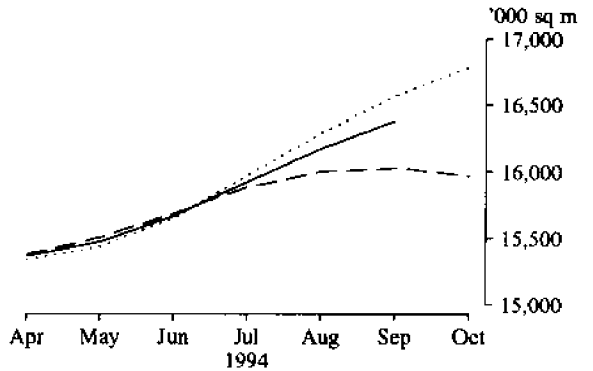
**M8. TOBACCO AND CIGARETTES  
(Average movement 8%)**



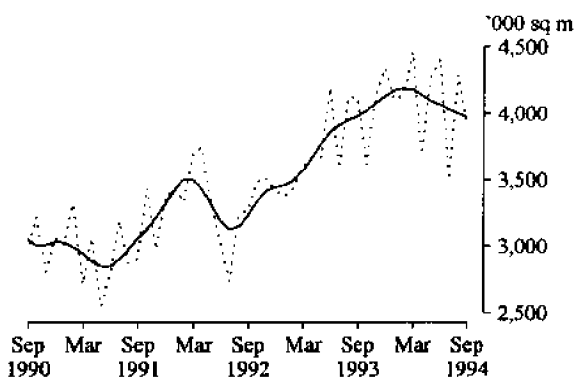
**M9. MAN-MADE FIBRE WOVEN FABRIC**



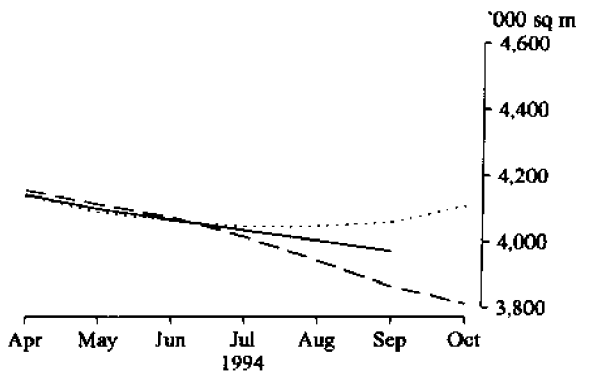
**M9. MAN-MADE FIBRE WOVEN FABRIC  
(Average movement 6%)**



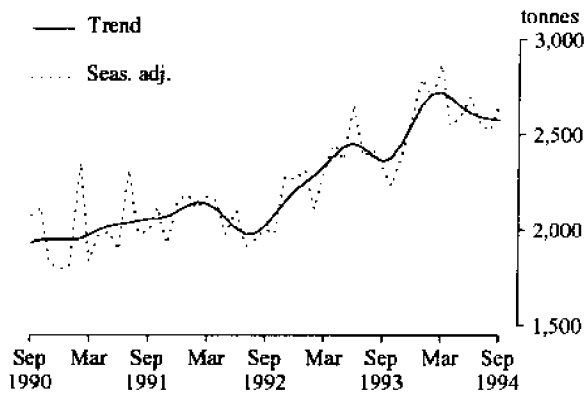
**M10. COTTON WOVEN FABRIC(f)**



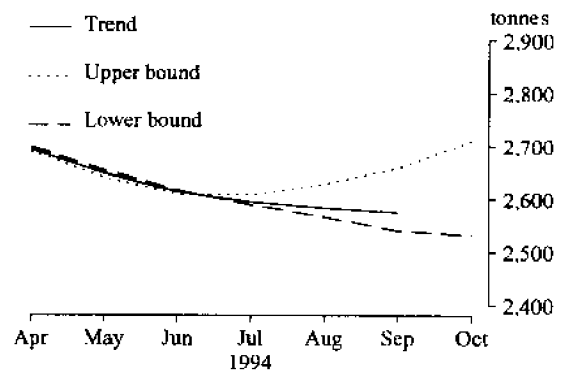
**M10. COTTON WOVEN FABRIC  
(Average movement 9%)**



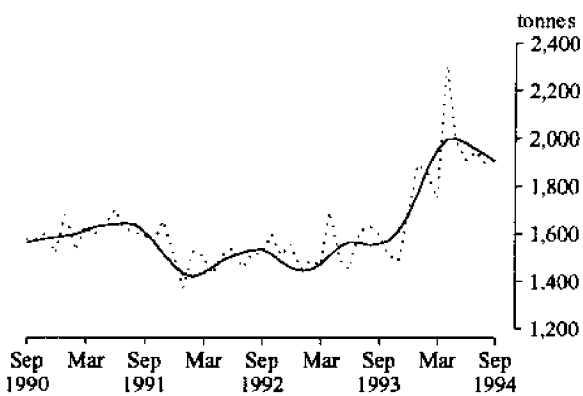
**M11. COTTON YARN(f)**



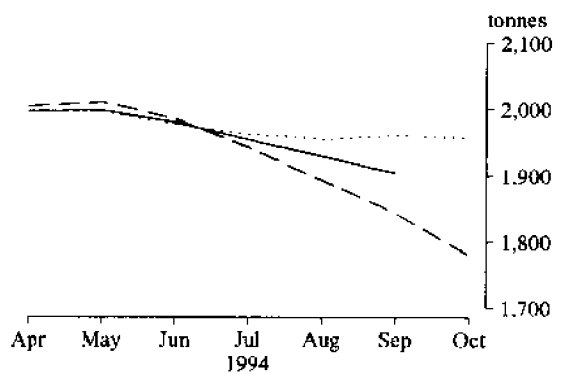
**M11. COTTON YARN  
(Average movement 8%)**



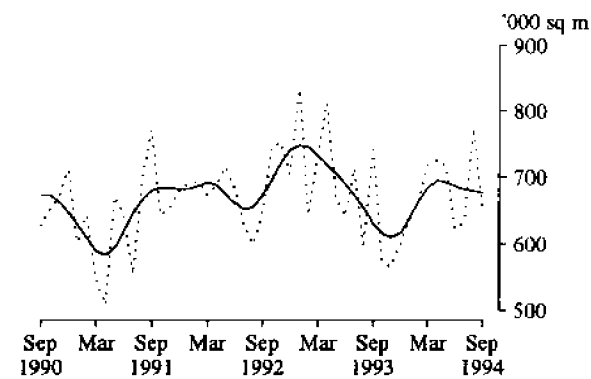
**M12. WOOL YARN(f)**



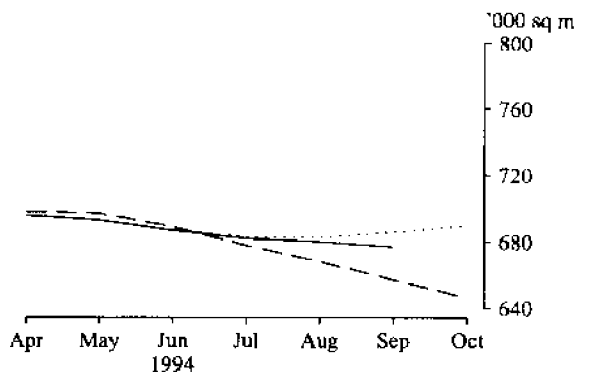
**M12. WOOL YARN  
(Average movement 6%)**



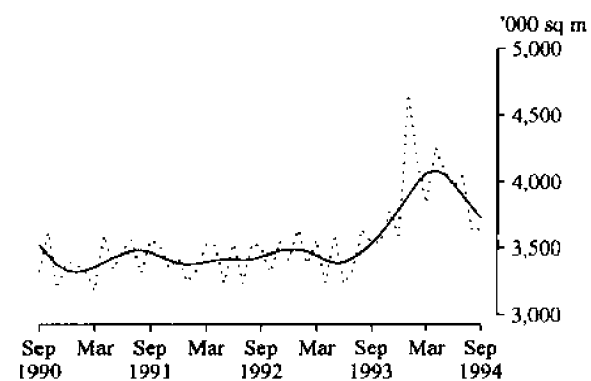
**M13. WOOL WOVEN FABRIC(f)**



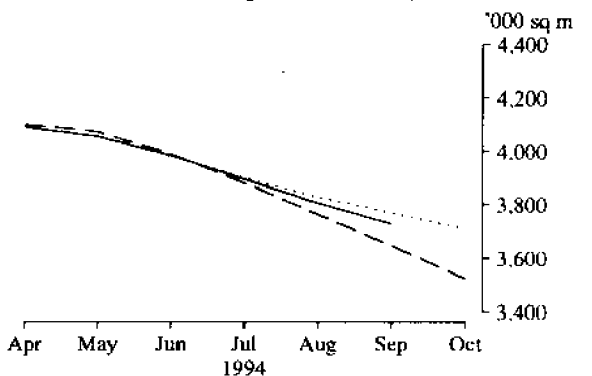
**M13. WOOL WOVEN FABRIC  
(Average movement 8%)**



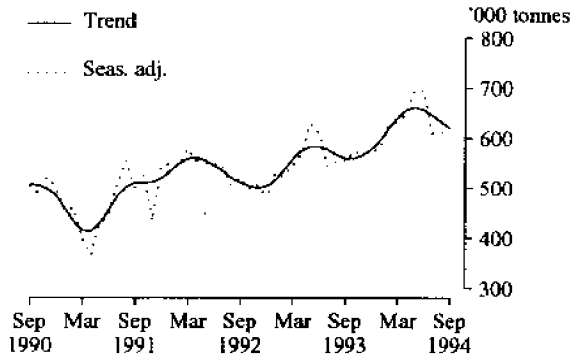
**M14. TEXTILE FLOOR COVERINGS**



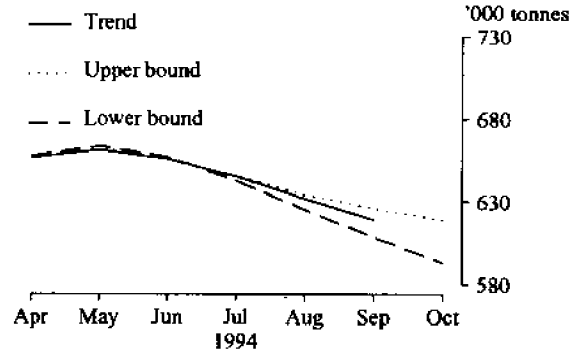
**M14. TEXTILE FLOOR COVERINGS  
(Average movement 6%)**



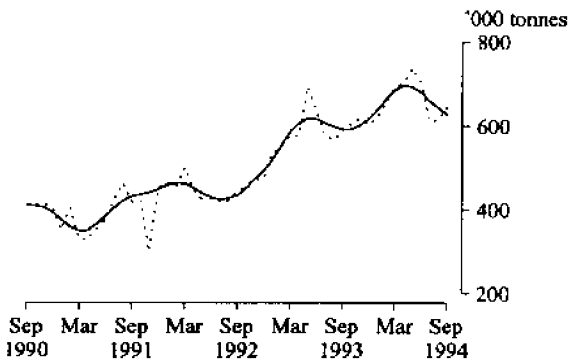
**M23. BASIC IRON, SPIEGELEISEN AND SPONGE IRON**



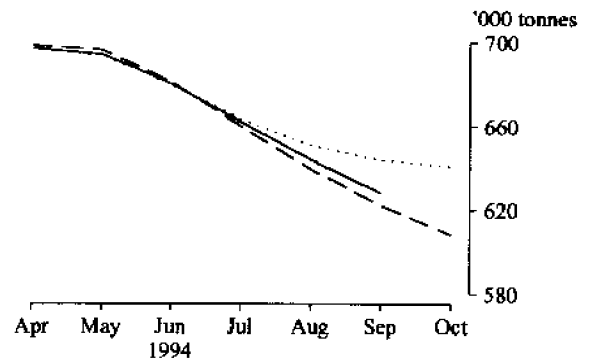
**M23. BASIC IRON, SPIEGELEISEN AND SPONGE IRON**  
(Average movement 5%)



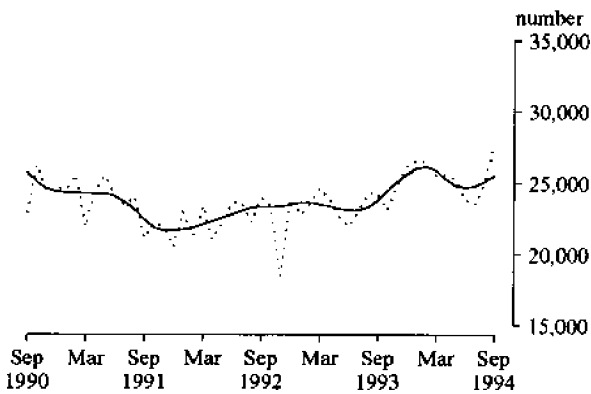
**M24. BLOOMS AND SLABS**



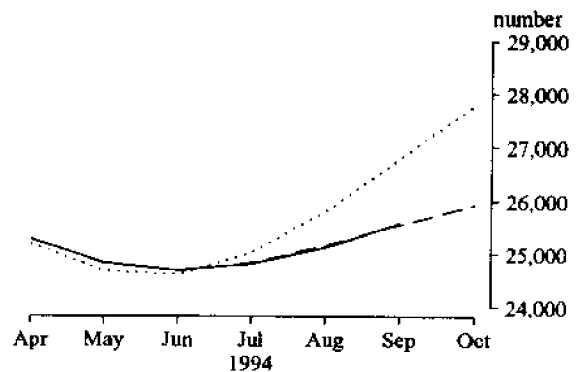
**M24. BLOOMS AND SLABS**  
(Average movement 6%)



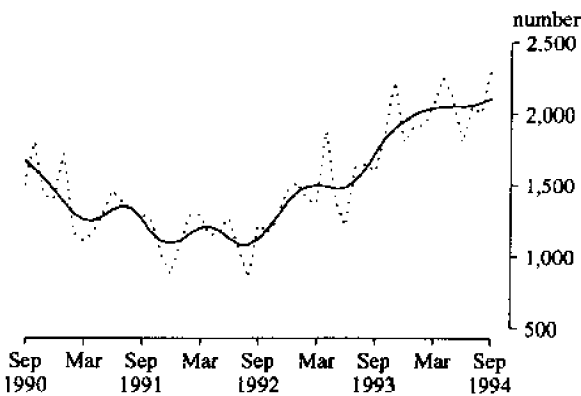
**M25. CARS AND STATION WAGONS**



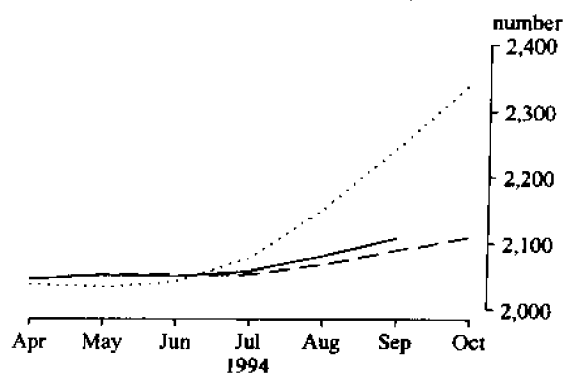
**M25. CARS AND STATION WAGONS**  
(Average movement 8%)

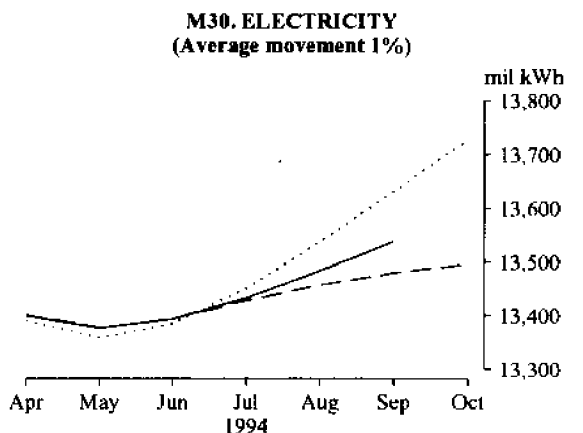
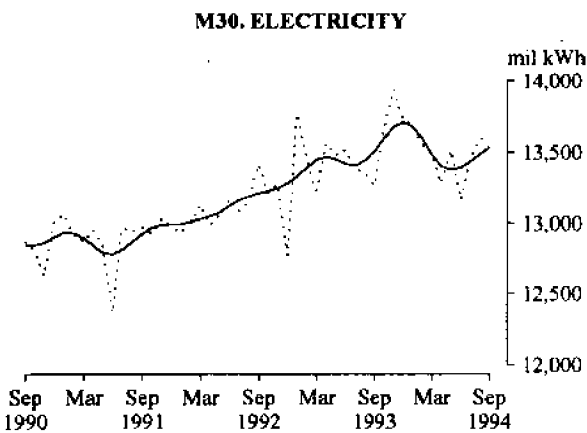
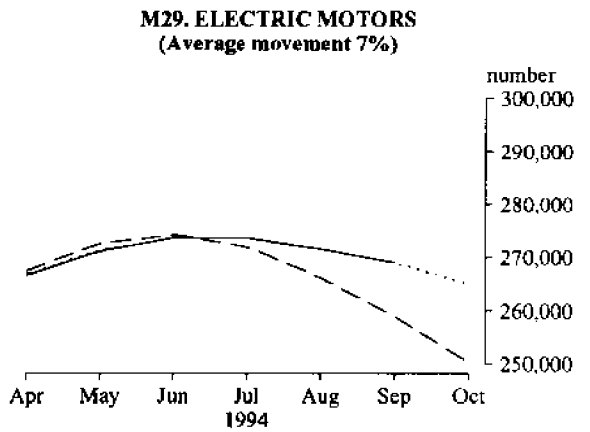
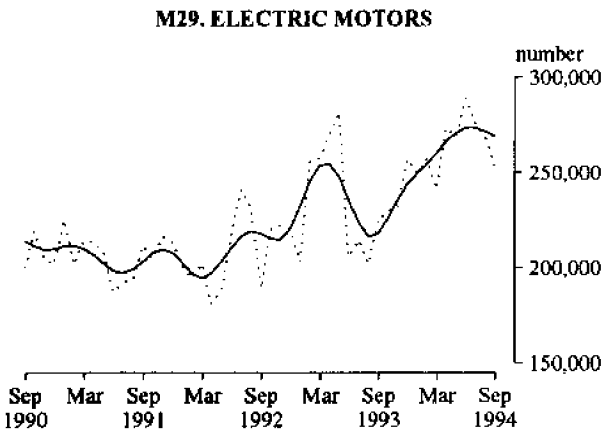
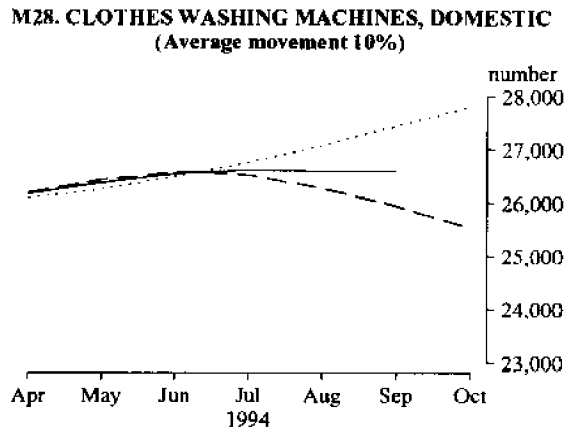
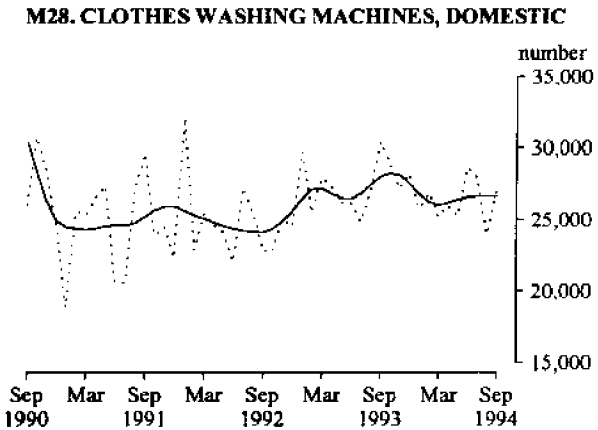
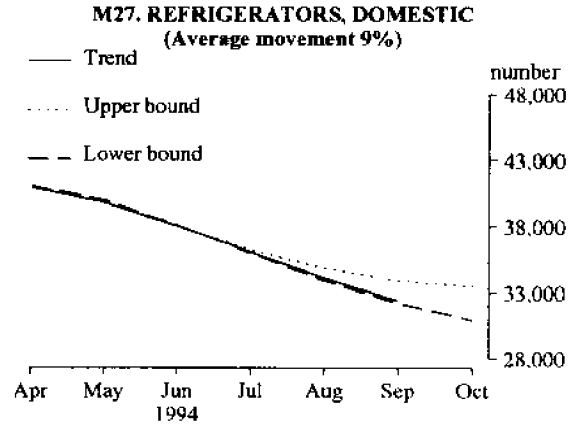
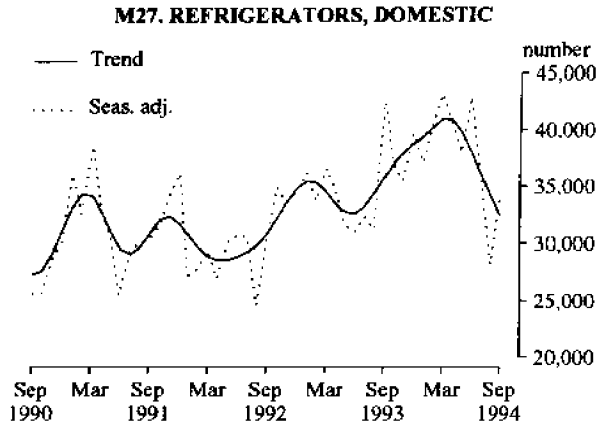


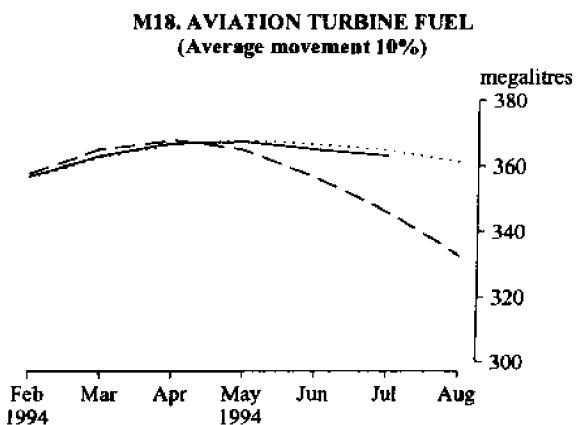
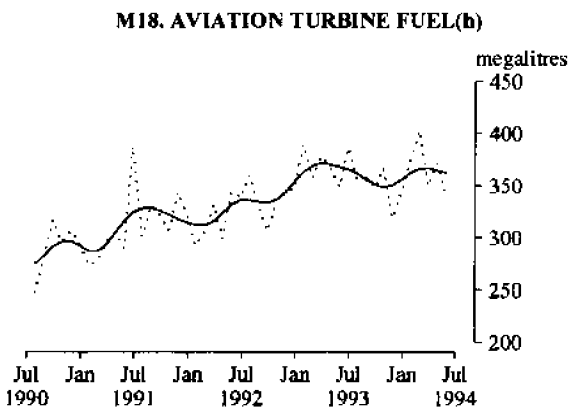
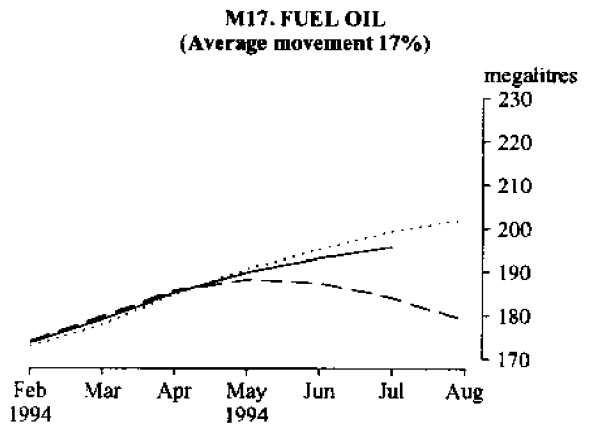
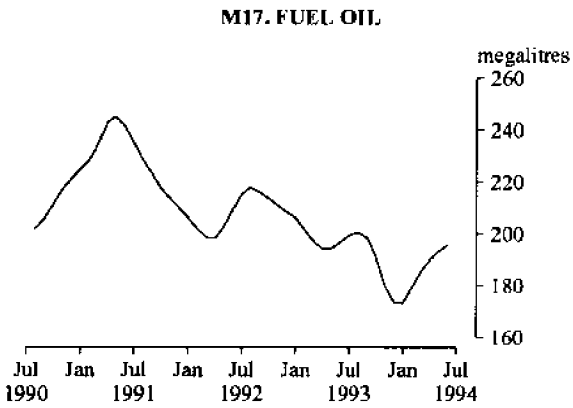
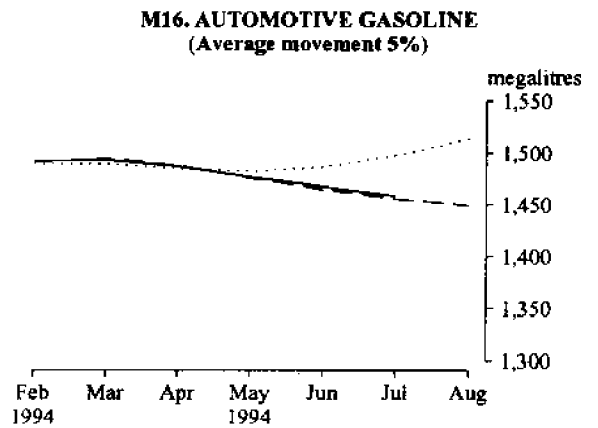
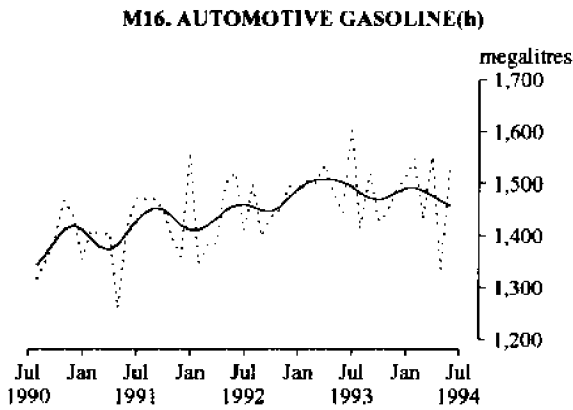
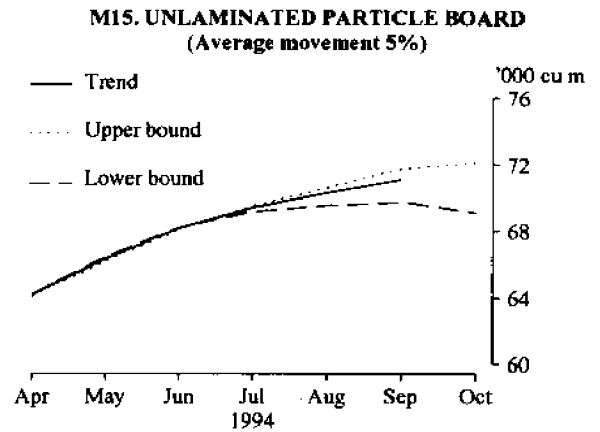
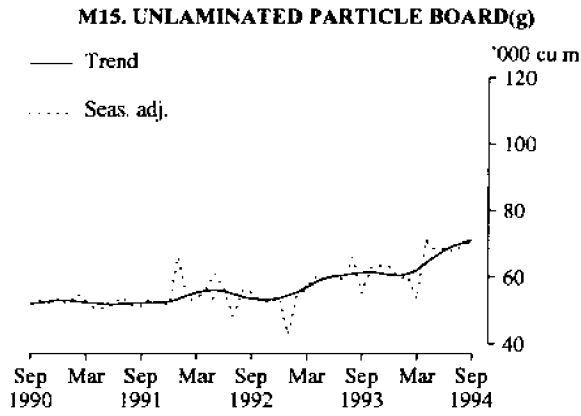
**M26. VEHICLES FOR GOODS AND MATERIALS(k)**

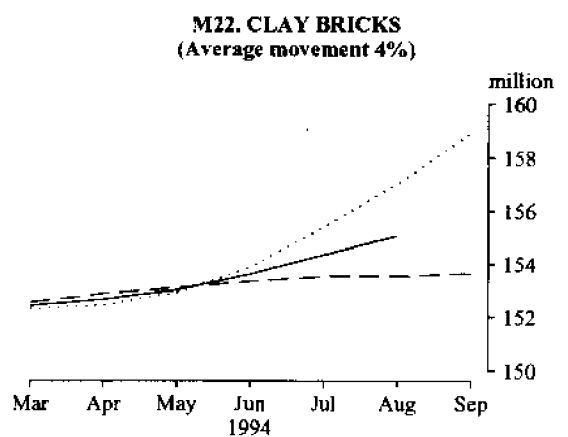
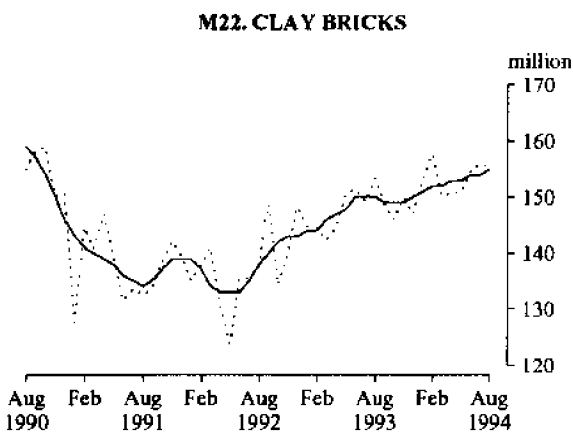
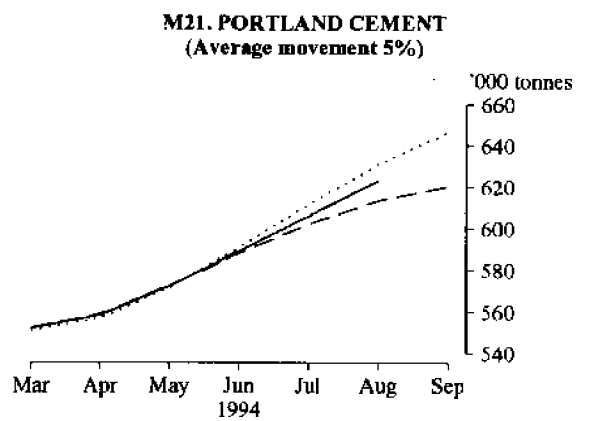
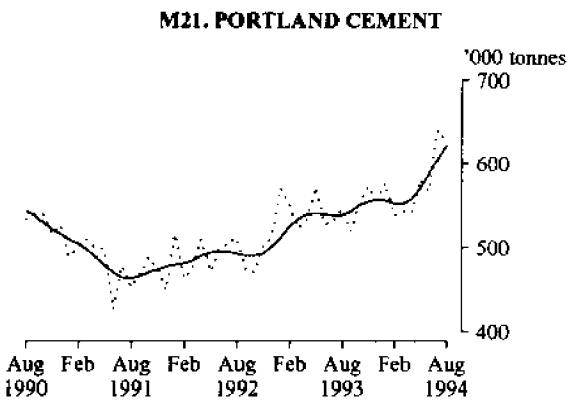
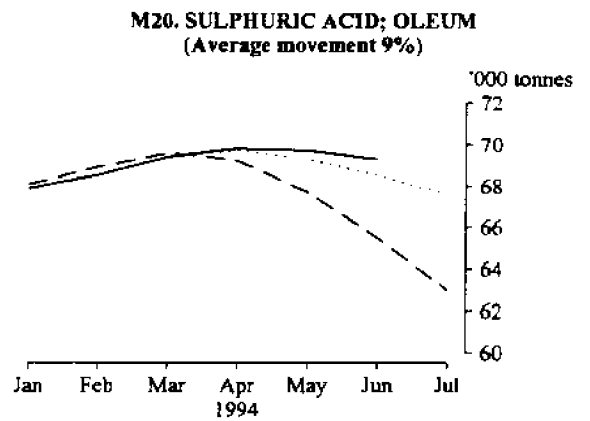
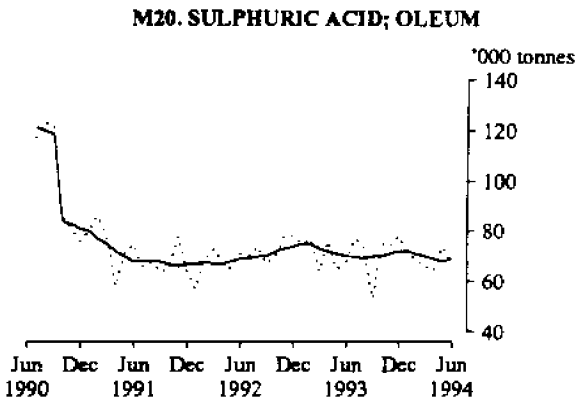
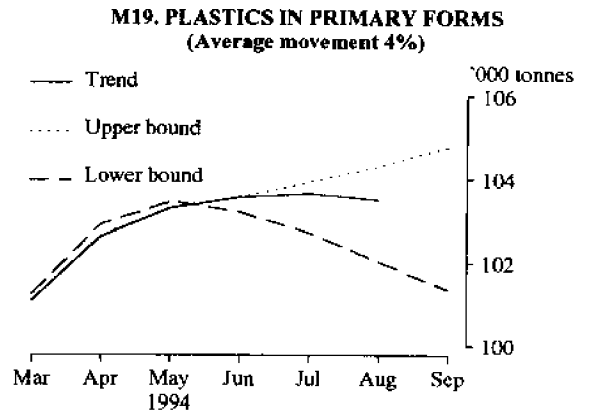
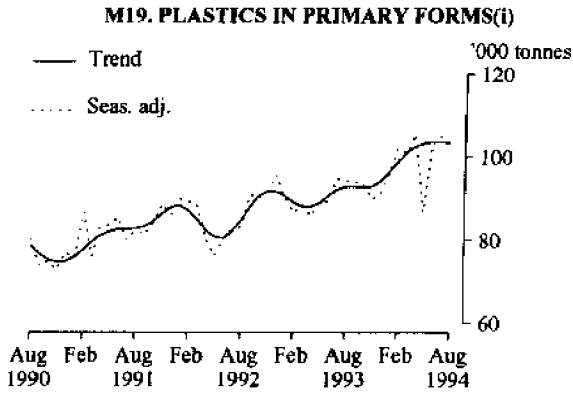


**M26. VEHICLES FOR GOODS AND MATERIALS**  
(Average movement 12%)

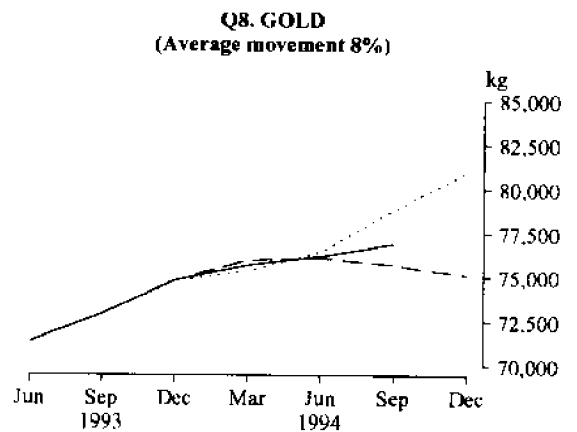
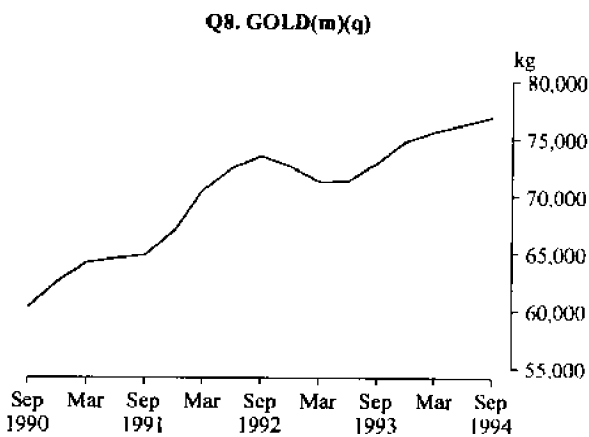
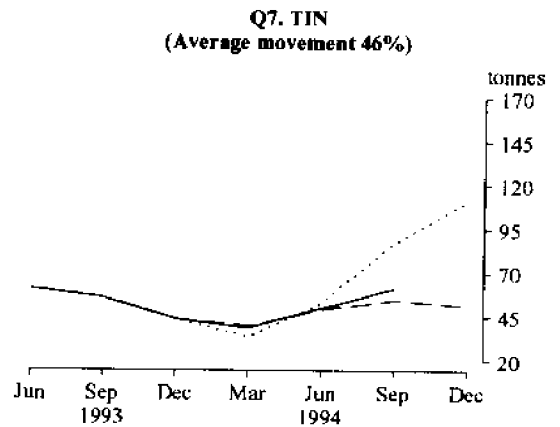
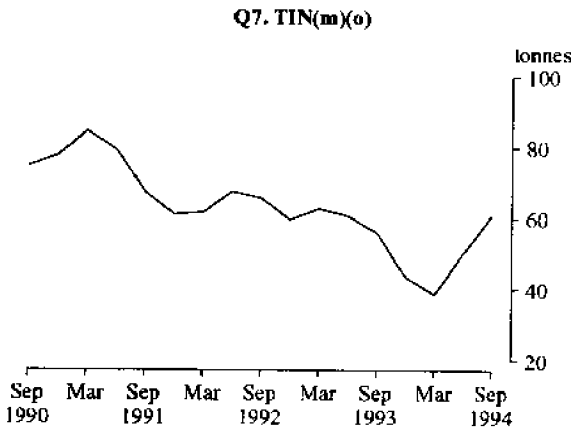
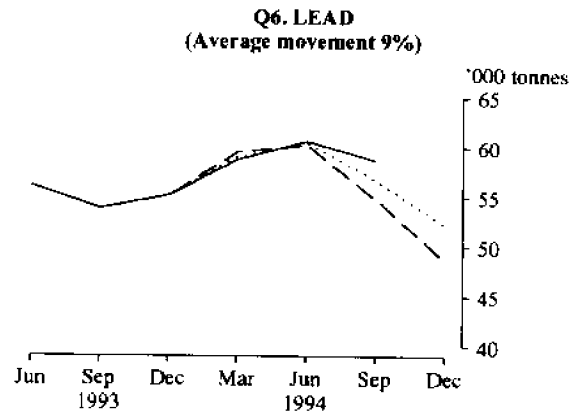
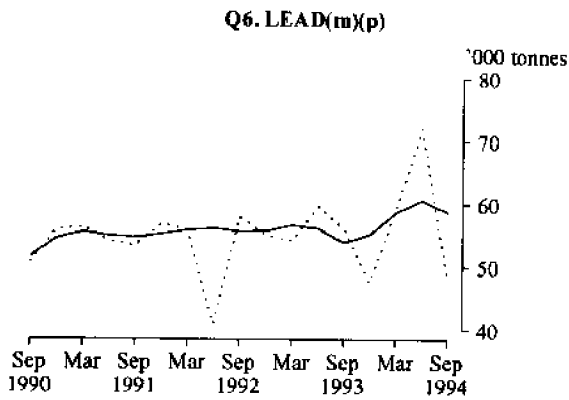
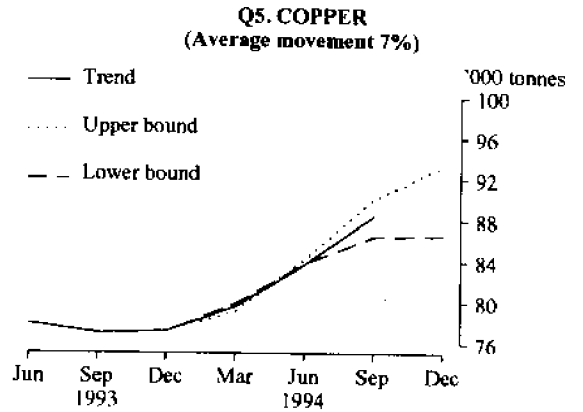
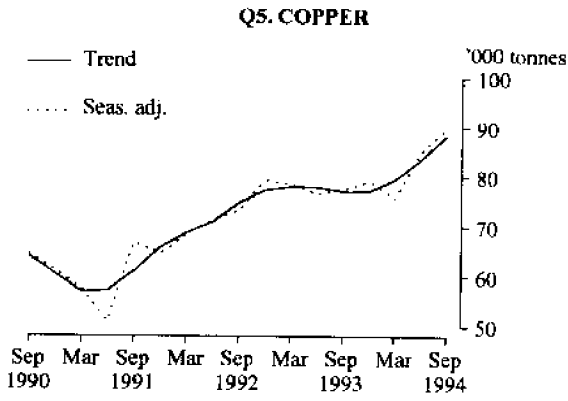








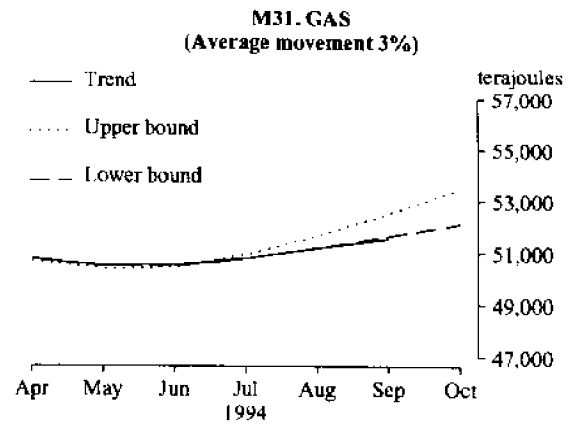
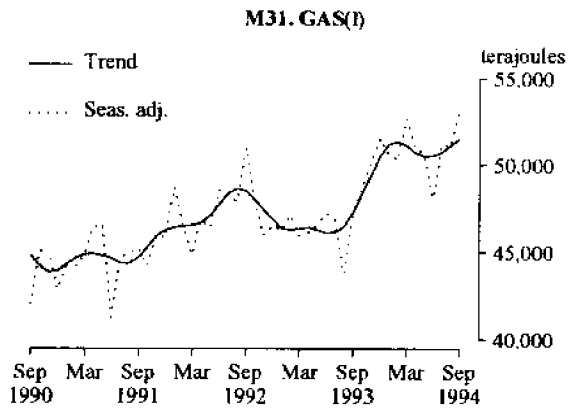




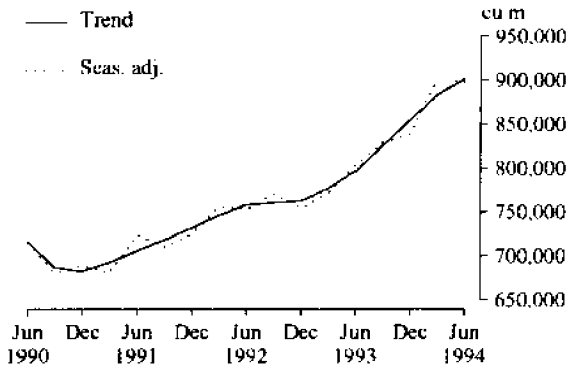
## PRODUCTION STATISTICS, AUSTRALIA, SEPTEMBER 1994, PRELIMINARY

No. Item	Series	Unit	1994									Percentage changes between latest month shown and-	
			Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	prev. month	same month prev. year
M1. Red meat(a)	Orig.	tonnes	197,836	233,570	252,414	226,398	254,836	223,595	218,342	235,055	n.y.a.	7.7	1.1
	S. adj.	"	243,718	242,443	230,464	238,612	252,291	222,876	231,871	225,805	n.y.a.	-2.6	-5.5
	Trend r	"	234,898	237,846	239,180	238,547	236,606	234,001	231,076	228,760	n.y.a.	-1.0	-3.3
M2. Chicken meat(b)	Orig.	"	37,617	36,613	41,323	41,301	39,063	42,313	41,225	36,353	n.y.a.	11.8	0.6
	S. adj.	"	37,173	38,497	40,846	40,134	40,186	40,445	39,473	38,888	n.y.a.	-1.5	5.6
	Trend r	"	39,184	39,561	39,843	39,966	40,026	39,983	39,872	39,567	n.y.a.	-0.8	4.6
M3. Cheese(c)	Orig.	"	22,544	18,186	19,834	18,171	16,283	8,995	n.y.a.	n.y.a.	n.y.a.	44.8	3.9
	S. adj.	"	19,126	18,831	21,470	21,841	26,748	18,094	n.y.a.	n.y.a.	n.y.a.	-32.4	5.5
	Trend r	"	19,132	20,105	21,065	21,797	22,251	22,408	n.y.a.	n.y.a.	n.y.a.	0.7	25.3
M4. Butter(c)	Orig.	"	14,978	11,755	12,158	9,103	6,917	7,200	n.y.a.	n.y.a.	n.y.a.	4.1	37.1
	S. adj.	"	12,430	12,037	12,820	12,010	11,714	12,242	n.y.a.	n.y.a.	n.y.a.	4.5	19.1
	Trend r	"	12,356	12,337	12,279	12,201	12,122	12,018	n.y.a.	n.y.a.	n.y.a.	-0.8	15.5
M5. Chocolate base confectionery	Orig. r	"	8,390	9,405	9,561	7,419	8,758	9,277	8,840	10,726	10,608	-1.1	14.0
	S. adj. r	"	15,892	9,362	8,409	8,203	8,685	8,856	8,712	8,901	10,098	13.4	13.7
	Trend r	"	9,352	9,070	8,780	8,593	8,583	8,714	8,922	9,160	9,437	3.0	1.9
M6. Other confectionery	Orig. r	"	3,342	5,583	5,825	4,705	5,717	6,283	6,014	7,300	7,337	0.5	20.9
	S. adj. r	"	6,388	5,981	5,477	5,771	5,743	5,914	5,657	5,978	6,489	8.5	21.5
	Trend r	"	5,971	5,919	5,826	5,756	5,748	5,803	5,905	6,028	6,162	2.2	11.3
M7. Beer(d)	Orig.	mil litres	151	134	164	126	131	125	n.p.	n.p.	n.p.	-4.9	-3.7
	S. adj.	"	160	146	151	134	140	145	n.p.	n.p.	n.p.	3.6	-3.0
	Trend r	"	148	147	146	144	143	144	n.p.	n.p.	n.p.	0.6	-4.2
M8. Tobacco and cigarettes(e)	Orig.	tonnes	1,001	2,070	2,240	1,382	2,164	2,171	2,419	2,395	2,186	-8.7	7.4
	S. adj.	"	1,861	1,909	1,898	1,615	1,861	2,094	2,238	2,124	2,188	3.1	7.2
	Trend r	"	1,866	1,837	1,830	1,861	1,922	2,005	2,090	2,162	2,222	2.8	11.5
M9. Man-made fibre woven fabric	Orig.	'000 sq m	9,819	16,074	16,070	14,435	15,945	17,325	16,825	r 17,358	17,363	0.0	9.1
	S. adj.	"	16,880	15,568	14,740	15,127	15,340	15,798	16,035	r 16,433	16,195	-1.4	6.8
	Trend r	"	15,443	15,409	15,362	15,368	15,474	15,671	15,922	16,167	16,378	1.3	6.2
M10. Cotton Woven fabric(f)	Orig.	"	1,619	4,180	4,797	3,862	4,414	4,874	4,157	4,534	4,447	-1.9	-1.2
	S. adj.	"	4,105	4,138	4,465	3,688	4,265	4,413	3,497	4,293	3,910	-8.9	-5.0
	Trend r	"	4,175	4,189	4,180	4,141	4,097	4,065	4,032	4,002	3,971	0.8	-0.1
M11. Cotton yarn(f)	Orig.	tonnes	1,583	2,550	3,081	2,422	2,612	3,201	2,736	2,818	3,000	6.5	14.6
	S. adj.	"	2,793	2,698	2,869	2,547	2,594	2,699	2,568	2,520	2,648	5.1	14.1
	Trend r	"	2,653	2,712	2,724	2,693	2,648	2,614	2,594	2,584	2,575	0.4	9.2
M12. Wool yarn(f)	Orig.	"	1,113	1,830	1,894	1,954	2,141	2,040	2,011	r 2,197	2,088	-4.9	16.1
	S. adj.	"	1,889	1,856	1,750	2,309	1,984	1,908	1,948	r 1,893	1,908	0.8	19.5
	Trend r	"	1,770	1,873	1,955	1,997	1,998	1,979	1,954	1,929	1,905	-1.3	22.4
M13. Wool woven fabric(f)	Orig.	'000 sq m	369	725	832	636	735	629	636	885	677	-23.5	-16.0
	S. adj.	"	637	665	719	725	716	623	634	774	651	-15.8	-13.1
	Trend r	"	639	665	685	696	693	687	682	680	677	-0.4	7.2
M14. Textile floor coverings	Orig.	"	2,513	4,059	4,064	3,822	4,366	4,046	r 4,001	r 4,137	4,116	-0.5	3.5
	S. adj.	"	4,660	4,167	3,836	4,255	4,075	3,963	r 4,048	r 3,626	3,650	0.7	3.1
	Trend r	"	3,893	3,992	4,067	4,088	4,055	3,983	3,896	3,805	3,729	-2.0	5.5
M15. Unlaminated particle board(g)	Orig.	'000 cu m	32	57	67	64	70	73	r 66	78	79	0.4	17.4
	S. adj.	"	60	60	53	71	68	69	r 68	69	71	2.8	29.1
	Trend r	"	61	61	62	64	66	68	69	70	71	1.1	15.5
M16. Automotive gasoline(h)	Orig.	megalitres	1,610	1,425	1,572	1,358	1,591	1,338	1,589	n.y.a.	n.y.a.	18.8	5.8
	S. adj.	"	1,487	1,512	1,548	1,432	1,553	1,334	1,526	n.y.a.	n.y.a.	14.4	5.7
	Tend r	"	1,483	1,492	1,493	1,487	1,477	1,467	1,458	n.y.a.	n.y.a.	-0.6	-2.9

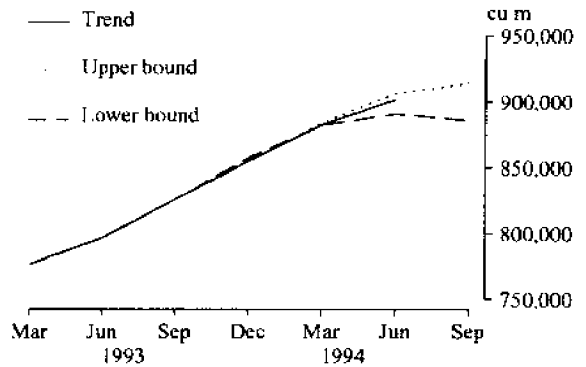
For footnotes see end of tables



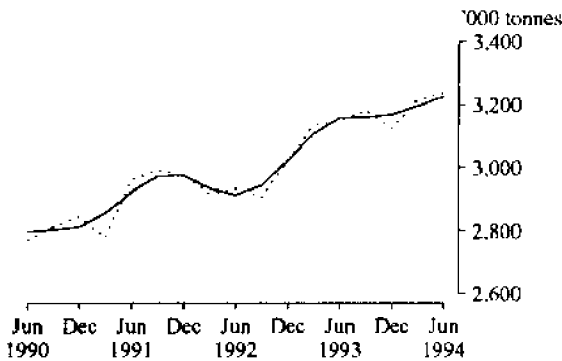
**Q1. UNDRESSED SAWN TIMBER(m)(n)**



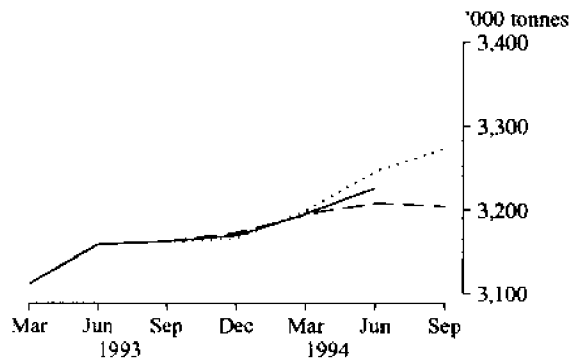
**Q1. UNDRESSED SAWN TIMBER  
(Average movement 3%)**



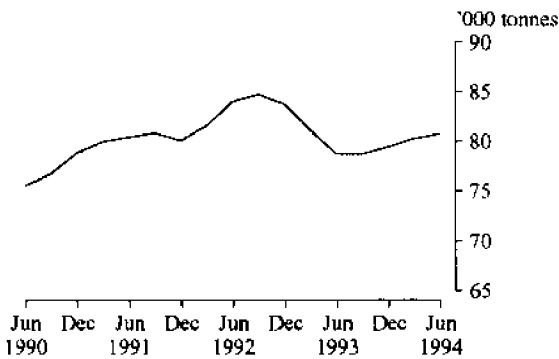
**Q2. ALUMINA(n)**



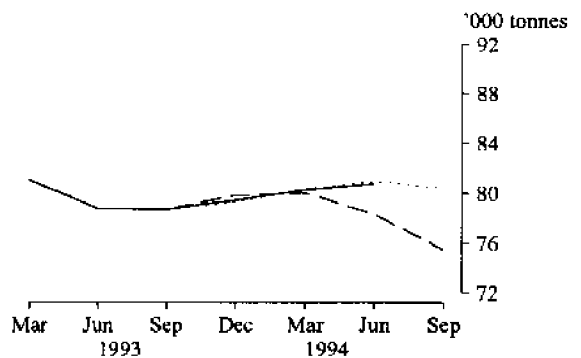
**Q2. ALUMINA  
(Average movement 2%)**



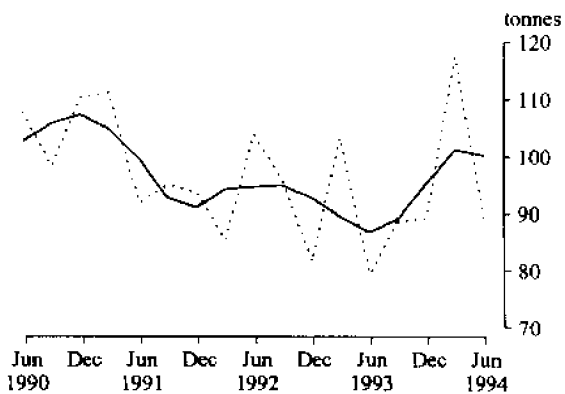
**Q3. ZINC(m)(o)**



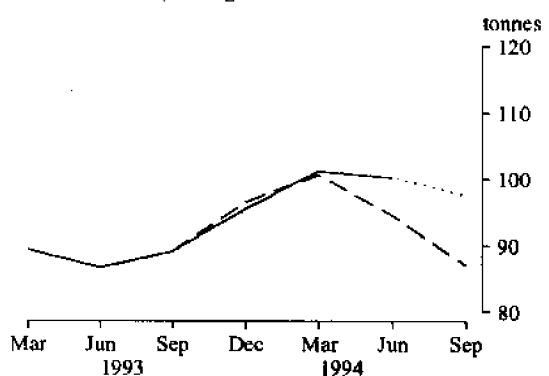
**Q3. ZINC  
(Average movement 6%)**



**Q4. SILVER(m)**



**Q4. SILVER  
(Average movement 10%)**



## PRODUCTION STATISTICS, AUSTRALIA, SEPTEMBER 1994, PRELIMINARY

No. Item	Series	Unit	1994									Percentage changes between latest month shown and-	
			Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	prev. month	same month prev. year
M17. Fuel oil(h)	Orig.	megalitres	195	152	175	192	175	198	196	n.y.a.	n.y.a.	-1.0	5.3
	S. adj.	"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.y.a.	n.y.a.	n.a.	n.a.
	Trend r	"	174	173	179	185	190	193	196	n.y.a.	n.y.a.	1.6	-0.5
M18. Aviation turbine fuel(h)	Orig.	"	355	329	362	348	353	342	334	n.y.a.	n.y.a.	-2.3	-4.6
	S. adj.	"	319	344	374	403	350	372	339	n.y.a.	n.y.a.	-8.9	-2.9
	Trend r	"	351	357	363	367	367	365	363	n.y.a.	n.y.a.	-0.5	-1.3
M19. Plastics in primary forms(i)	Orig.	'000 tonnes	82.8	96.2	106.0	100.9	86.9	100.3	105.4	113.7	103.7	-8.9	4.9
	S. adj.	"	95.8	102.0	100.9	105.5	86.7	103.2	104.9	102.4	101.8	-0.5	8.4
	Trend r	"	96.1	98.8	101.2	102.8	103.4	103.4	103.2	103.0	102.8	-0.2	10.7
M20. Sulphuric acid; oleum	Orig.	"	82.4	71.3	72.5	74.8	71.3	68.9	n.p.	n.p.	n.p.	-3.4	-8.1
	S. adj.	"	67.9	65.9	63.5	73.9	67.0	70.2	n.p.	n.p.	n.p.	4.7	-8.2
	Trend r	"	69.9	68.5	67.7	68.3	69.3	70.0	n.p.	n.p.	n.p.	1.1	1.0
M21. Portland cement	Orig.	"	407	497	564	515	625	592	659	661	642	-3.0	23.8
	S. adj.	"	577	538	544	541	581	567	641	625	645	3.2	24.0
	Trend r	"	556	552	551	557	572	590	610	628	642	2.3	18.2
M22. Clay bricks	Orig.	million	98.3	150.3	172.6	143.8	166.9	161.1	155.5	174.9	162.6	-7.0	4.4
	S. adj.	"	152.9	157.7	150.3	150.9	150.9	154.7	155.4	155.6	156.3	0.5	5.0
	Trend r	"	151.3	152.0	152.4	152.6	152.9	153.5	154.4	155.3	156.4	0.7	4.7
M23. Basic iron, spiegeleisen and sponge iron	Orig.	'000 tonnes	582	556	607	628	652	646	643	649	643	-0.9	12.0
	S. adj.	"	582	624	634	649	696	696	609	613	614	0.2	11.0
	Trend r	"	596	618	641	656	661	656	645	632	619	-2.0	10.6
M24. Blooms and Slabs(j)	Orig.	"	613	590	647	667	681	658	661	680	681	0.2	9.0
	S. adj.	"	624	658	691	705	738	704	611	618	645	4.3	9.1
	Trend r	"	641	665	686	697	694	680	662	644	628	-2.5	6.0
M25. Cars and station wagons	Orig.	number	11,978	26,012	29,548	21,375	28,792	26,159	25,221	29,115	30,391	4.4	12.9
	S. adj.	"	26,577	26,396	25,458	25,630	25,235	23,846	23,510	24,982	27,759	11.1	14.6
	Trend r	"	26,034	26,133	25,830	25,290	24,839	24,691	24,815	25,128	25,578	1.8	7.2
M26. Vehicles for goods and materials(k)	Orig.	"	803	1,857	2,358	1,949	2,401	2,074	2,119	2,385	2,460	3.1	40.4
	S. adj.	"	1,912	1,927	2,070	2,251	2,132	1,800	2,049	2,001	2,329	16.4	45.6
	Trend r	"	1,991	2,026	2,041	2,046	2,051	2,050	2,058	2,081	2,108	1.3	22.2
M27. Refrigerators, domestic	Orig.	'000	35.8	41.6	49.4	34.4	38.9	38.1	31.2	30.8	32.8	6.6	-21.5
	S. adj.	"	37.1	40.6	43.2	40.7	38.0	42.9	36.1	28.1	34.1	21.2	-19.7
	Trend r	"	39.4	40.3	41.0	40.9	39.8	38.0	36.1	34.1	32.4	-5.0	-9.4
M28. Clothes washing machines, domestic	Orig.	"	11.8	26.4	29.4	24.0	25.2	29.4	30.2	30.0	30.4	1.3	-11.9
	S. adj.	"	25.8	26.8	25.2	26.0	25.3	28.6	27.9	24.0	27.1	13.0	-10.8
	Trend r	"	26.7	26.2	26.0	26.2	26.4	26.6	26.6	26.6	26.6	0.0	-4.9
M29. Electric motors	Orig.	"	161	256	279	255	265	289	271	277	302	9.0	15.0
	S. adj.	"	249	257	241	273	269	289	276	269	253	-5.9	12.9
	Trend r	"	250	255	261	267	271	274	274	272	269	-1.0	23.4
M30. Electricity	Orig.	mil k Wh	13,171	12,517	13,489	12,509	13,785	13,921	14,603	14,749	13,553	-8.1	2.3
	S. adj.	"	13,697	13,559	13,487	13,279	13,510	13,163	13,447	13,595	13,603	0.1	2.6
	Trend r	"	13,682	13,593	13,481	13,399	13,376	13,393	13,432	13,483	13,538	0.4	0.2
M31. Gas(l)	Orig.	terrajoules	39,975	40,478	47,002	46,223	55,116	57,719	62,250	64,168	57,784	-9.9	12.2
	S. adj.	"	50,670	50,266	52,673	50,991	50,669	48,074	51,207	51,099	53,306	4.3	13.0
	Trend r	"	51,190	51,348	51,085	50,732	50,507	50,525	50,759	51,155	51,549	0.8	9.1

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	856	850	830
	S. adj.	"	753	771	754	772	803	829	838	902	897	-0.6	11.7	
	Trend	"	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	"	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	"	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	91	104	14.3	11.8	
	S. adj.	"	104	96	82	103	79	89	89	118	89	-24.3	11.9	
	Trend	"	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	"	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	"	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	"	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	"	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'.

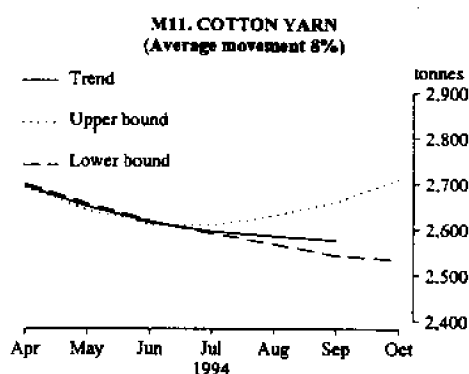
Readers should exercise care when interpreting the latest month's trend estimates because they will be revised when the next month's seasonally adjusted estimates become available. For further information, see Explanatory Notes 7 and 8.

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

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

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

The percentage change of 8% was chosen because the 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

