



May 1996

EMBARGOED UNTIL 11:30 AM THURS 4 JULY 1996

Manufacturing Production

Australia

ABS Catalogue No. 8301.0

NOTES

FORTHCOMING ISSUES

ISSUE	RELEASE DATE
June 1996	31 July 1996
July 1996	2 September 1996
August 1996	2 October 1996

IN THIS ISSUE

This publication presents monthly and quarterly estimates of selected major indicators of manufacturing production for Australia.

From page 5, there are two graphs shown for each available manufactured commodity. The left hand graph shows seasonally adjusted (where available) and trend estimates over the last four years. The right hand graph presents a short term sensitivity analysis of the trend estimates. The sensitivity analysis shows the current trend and two possible scenarios of how the trend might move if the next seasonally adjusted estimate rises or falls by the historical average monthly or quarterly movement for that series. A worked example is shown in the Technical Note on page 27.

The series 'M19 Footwear (excluding sports footwear)' and 'M20 Sports footwear' have been combined, and are now shown as 'M19 Footwear'. The effect on series M19 is negligible (approximately 1% higher, over recent periods).

Data and the graphs for the series 'M17 Wool woven fabric' have been removed from this issue, because the data are subject to significant revisions. The series will be re-inserted when these revisions are available.

EFFECTS OF ROUNDING

Estimates of change shown in this publication have been calculated using unrounded estimates and may be different from, but are more accurate than, movements obtained from the rounded estimates.

SYMBOLS AND OTHER USAGES

M	manufactured commodity collected by month
n.a.	not available
n.y.a.	not yet available
Q	manufactured commodity collected by quarter
r	figure or series revised since previous issue

INQUIRIES

For information about other ABS statistics and services, please refer to the back of this publication.

For further information about these statistics, contact John Ridley on (02) 268 4541.

W. McLennan
Australian Statistician

CONTENTS

	Page
EDITORIAL	
	Key points
GRAPHS	
M	Longer term trend and Short-term sensitivity analysis of each available monthly production item, Australia
Q	Longer term trend and Short-term sensitivity analysis of each available quarterly production item, Australia
TABLES	
1	Monthly production, Australia
2	Quarterly production, Australia
ADDITIONAL INFORMATION	
	Explanatory notes
	Technical note
	Glossary

KEY POINTS

GENERAL TRENDS

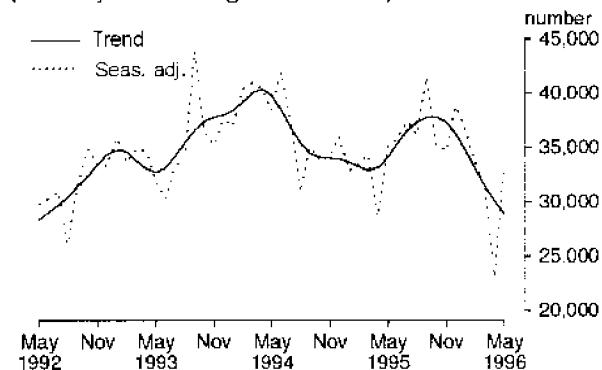
Latest trends indicate that of the 57 indicators available, 18 showed rising production trends, 21 showed falling trends while 18 were relatively stable.

SERIES TRENDS

Two of the more notable trends were Biscuits and Domestic refrigerators. Production of Biscuits rose for the second month in a row, after falling every month since October 1995. Domestic refrigerator production has also fallen every month since October 1995 and will require a rise in the seasonally adjusted series of just over 4% to reverse the trend.

M44 DOMESTIC REFRIGERATORS

(Seas. adj. series average movement 8%)

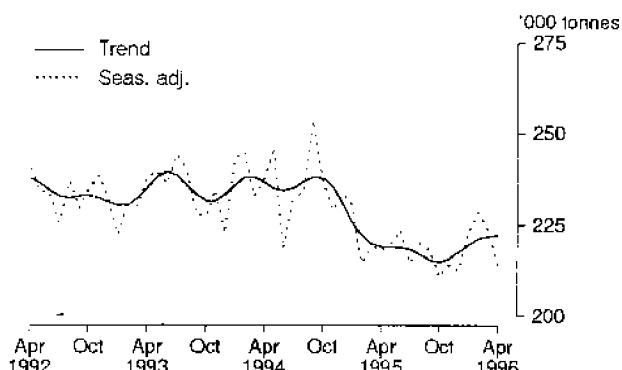


M

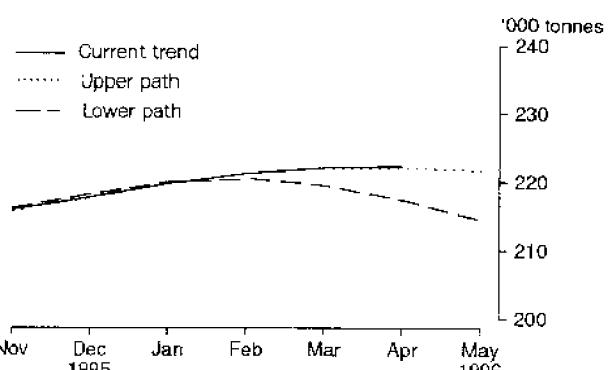
MONTHLY PRODUCTION

LONGER TERM TREND(a)

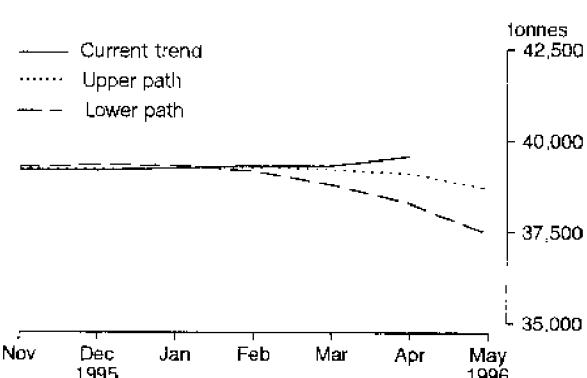
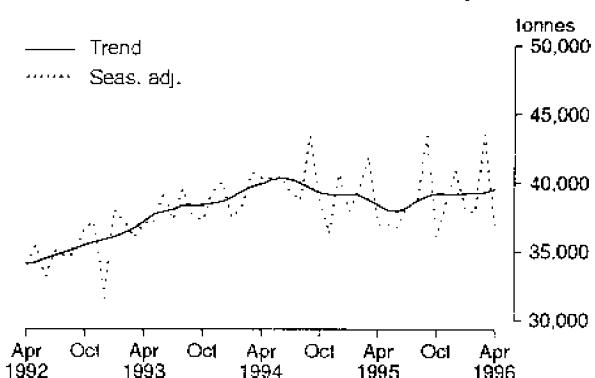
M1 RED MEAT (seas. adj. series average movement 4%)



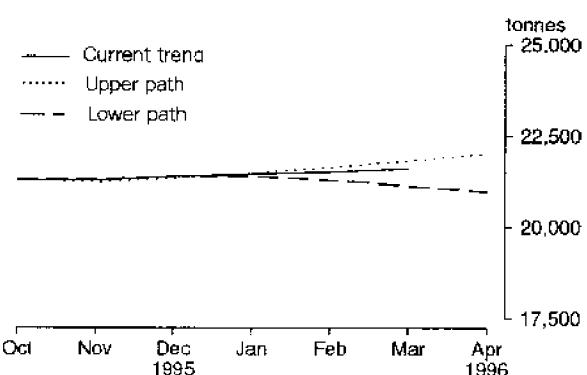
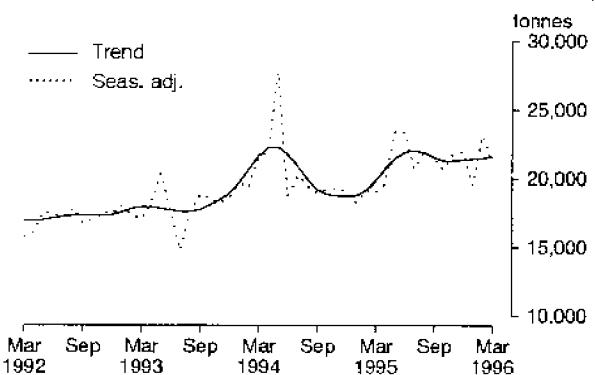
SHORT-TERM SENSITIVITY ANALYSIS



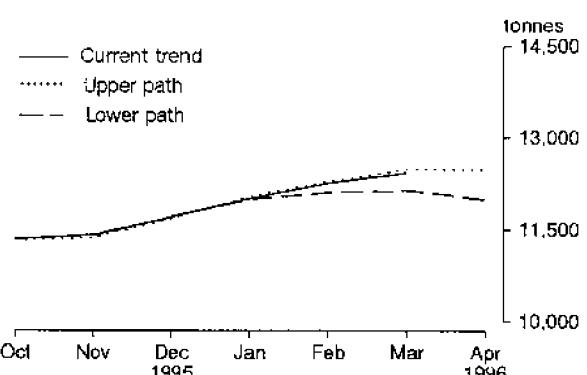
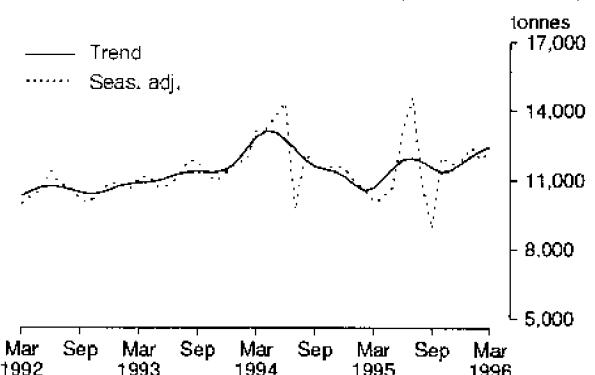
M2 CHICKEN MEAT (seas. adj. series average movement 4%)



M3 CHEESE(b) (seas. adj. series average movement 7%)



M4 BUTTER(b) (seas. adj. series average movement 7%)



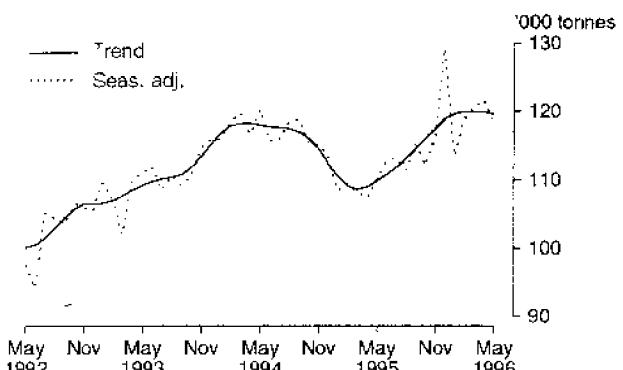
For footnotes see page 23

M

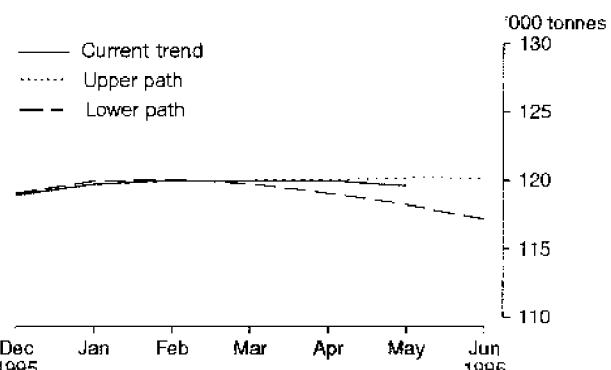
MONTHLY PRODUCTION continued

LONGER TERM TREND(a)

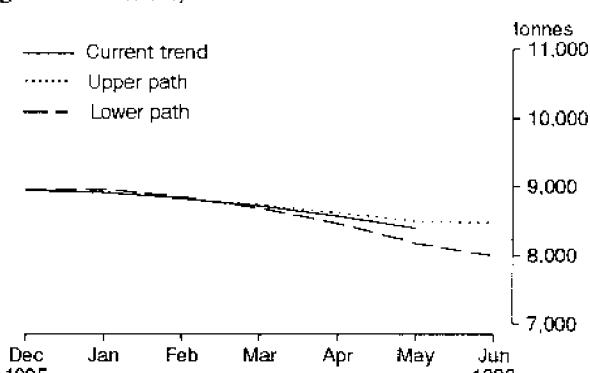
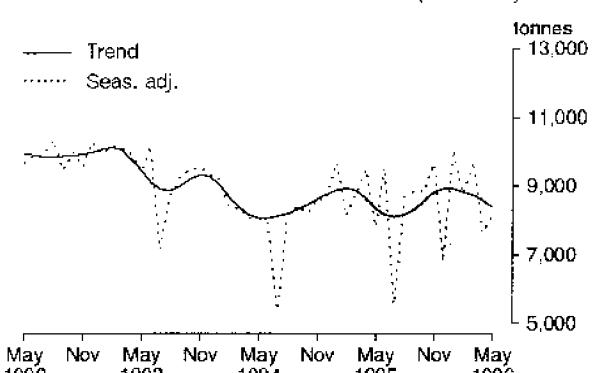
M5 FLOUR OF WHEAT OR OF MESLIN (seas. adj. series average movement 3%)



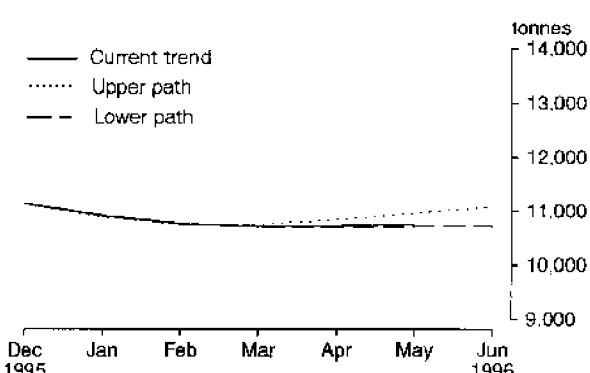
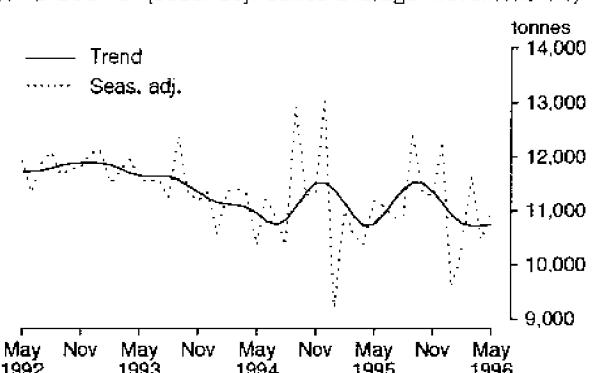
SHORT-TERM SENSITIVITY ANALYSIS



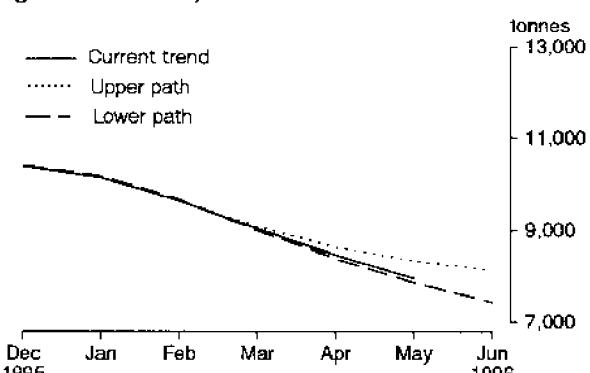
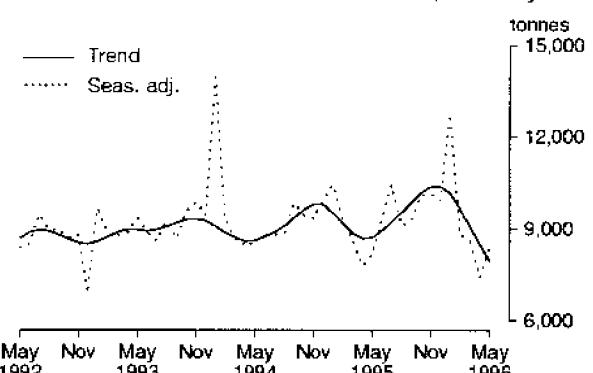
M6 PREPARED FOODS FROM CEREALS (seas. adj. series average movement 7%)



M7 BISCUITS (seas. adj. series average movement 4%)



M8 CHOCOLATE BASED CONFECTIONERY (seas. adj. series average movement 7%)



For footnotes see page 23

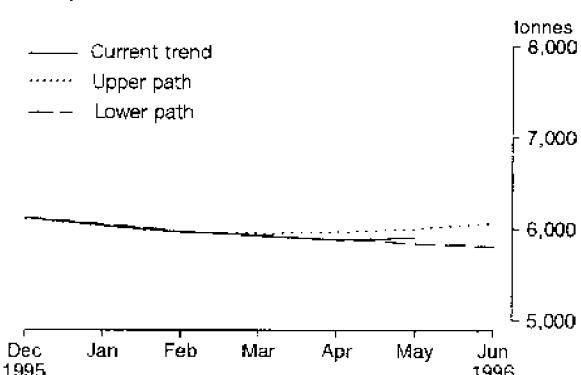
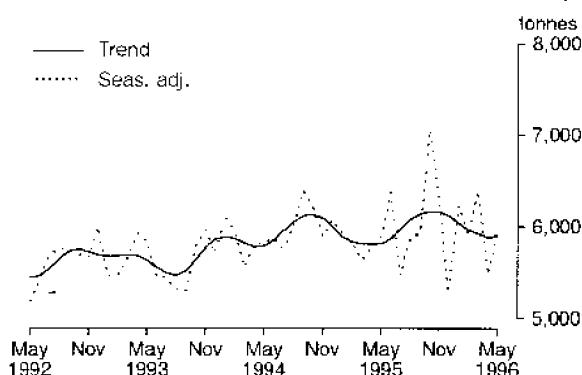
M

MONTHLY PRODUCTION continued

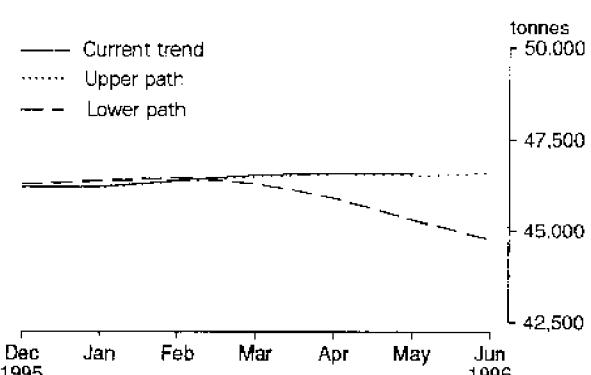
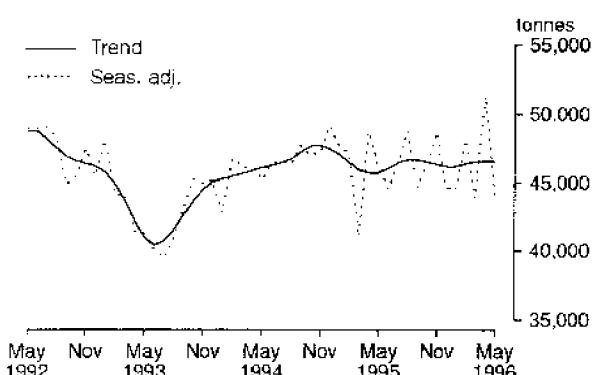
LONGER TERM TREND(a)

SHORT-TERM SENSITIVITY ANALYSIS

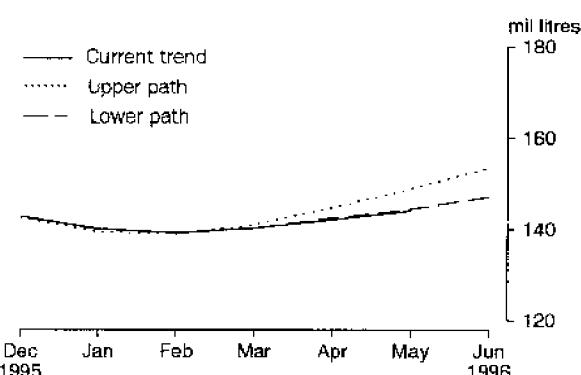
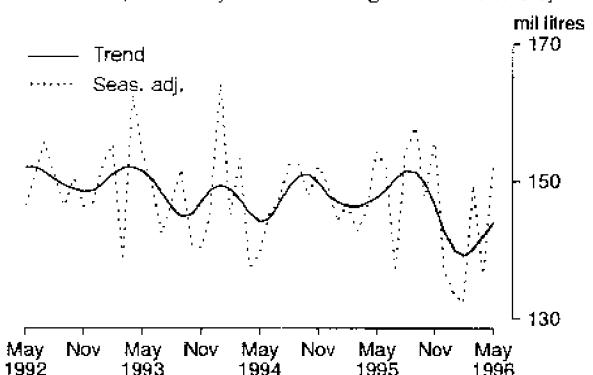
M9 OTHER CONFECTIONERY (seas. adj. series average movement 5%)



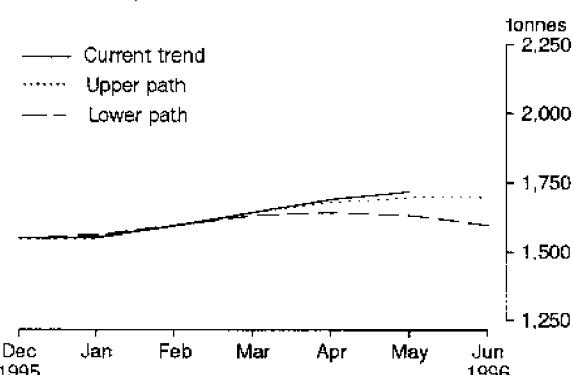
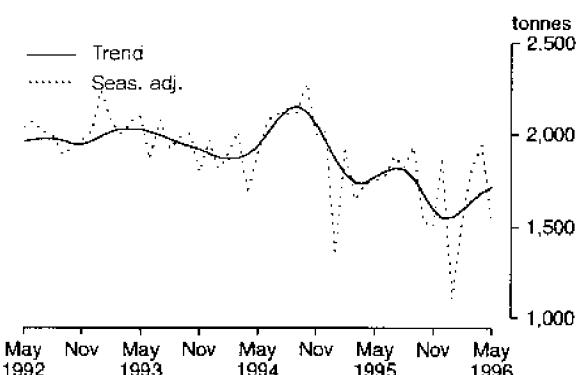
M10 MALT (seas. adj. series average movement 5%)



M11 BEER (seas. adj. series average movement 5%)



M12 TOBACCO AND CIGARETTES(c) (seas. adj. series average movement 7%)



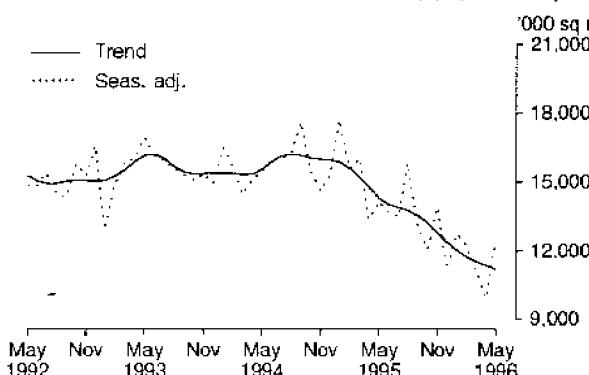
For footnotes see page 23

M

MONTHLY PRODUCTION continued

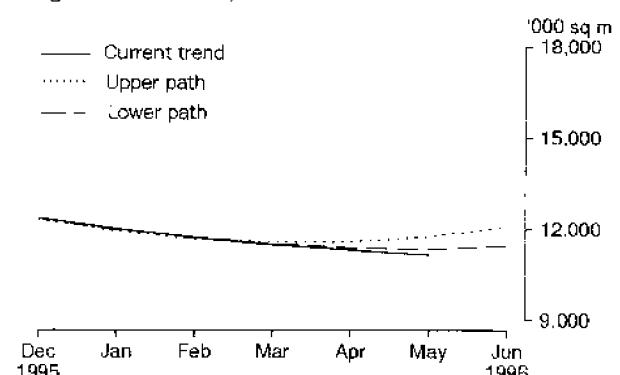
LONGER TERM TREND(a)

M13 MAN-MADE FIBRE WOVEN FABRIC(d) (seas. adj. series average movement 6%)

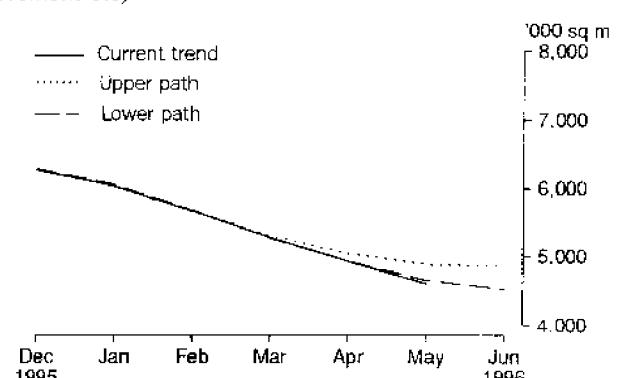
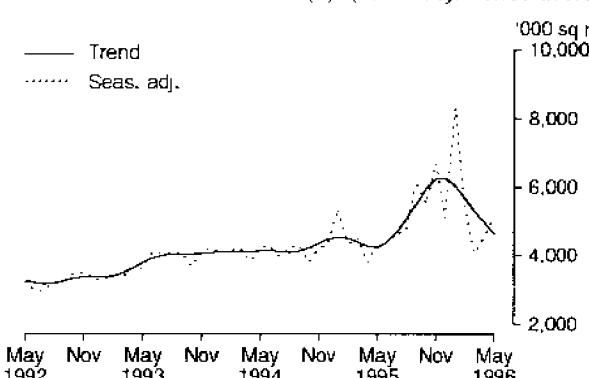


SHORT-TERM SENSITIVITY ANALYSIS

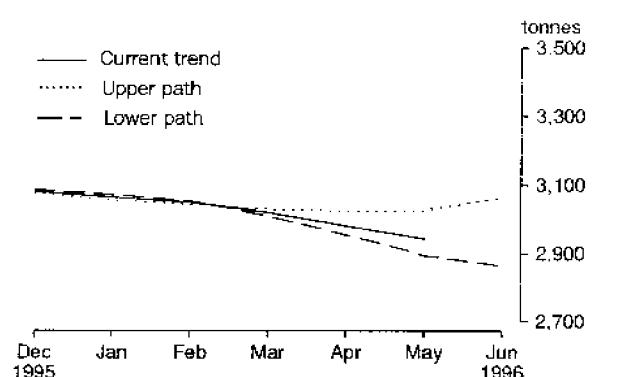
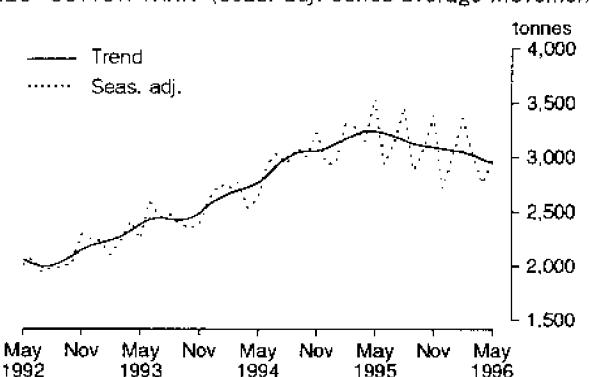
M13 MAN-MADE FIBRE WOVEN FABRIC(d) (seas. adj. series average movement 6%)



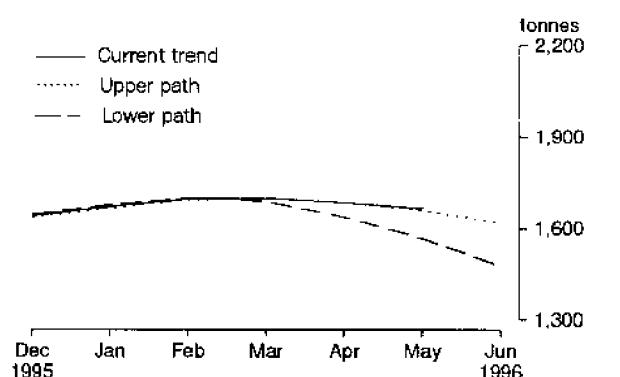
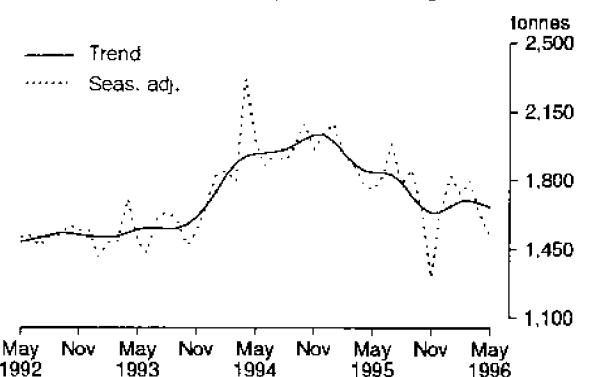
M14 COTTON WOVEN FABRIC(d) (seas. adj. series average movement 9%)



M15 COTTON YARN (seas. adj. series average movement 8%)



M16 WOOL YARN (seas. adj. series average movement 6%)



For footnotes see page 23

MMONTHLY PRODUCTION *continued*

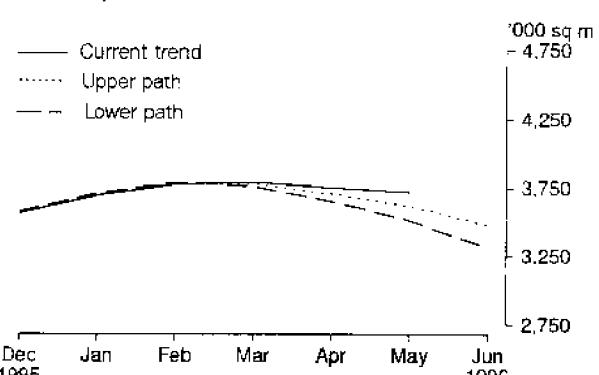
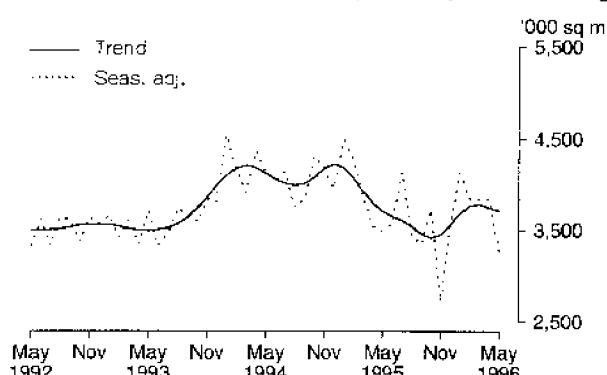
LONGER TERM TREND(a)

SHORT-TERM SENSITIVITY ANALYSIS

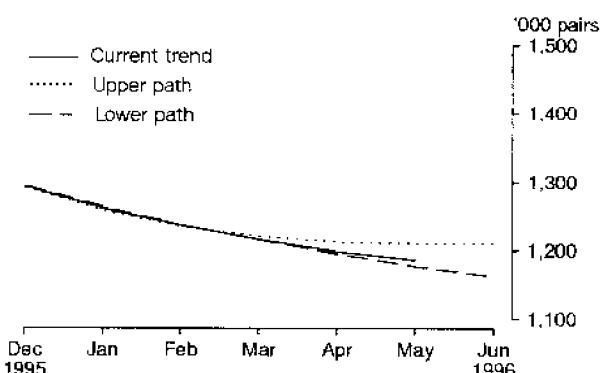
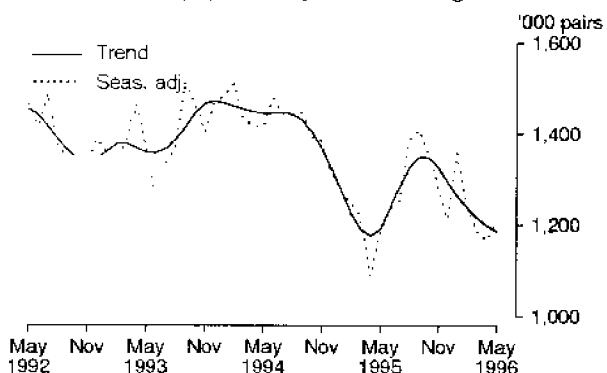
M17 WOOL WOVEN FABRIC (seas. adj. series average movement 8%)

Data in this series are subject to significant revisions and will be published when those revisions are available.

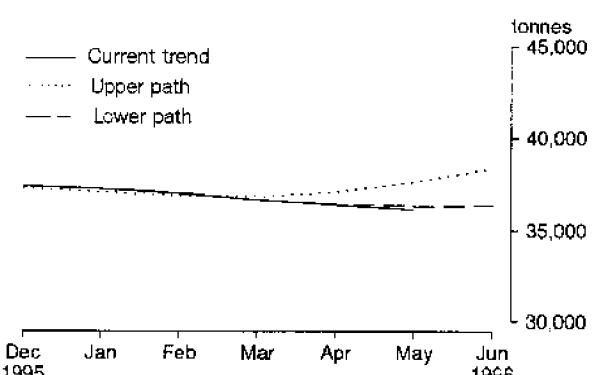
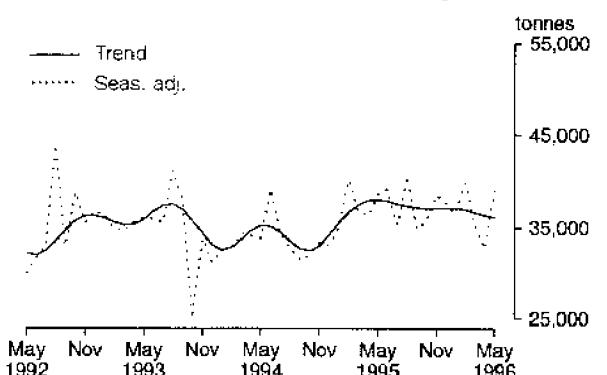
M18 TEXTILE FLOOR COVERINGS (seas. adj. series average movement 6%)



M19 FOOTWEAR(e) (seas. adj. series average movement 4%)



M21 NEWSPRINT (seas. adj. series average movement 6%)



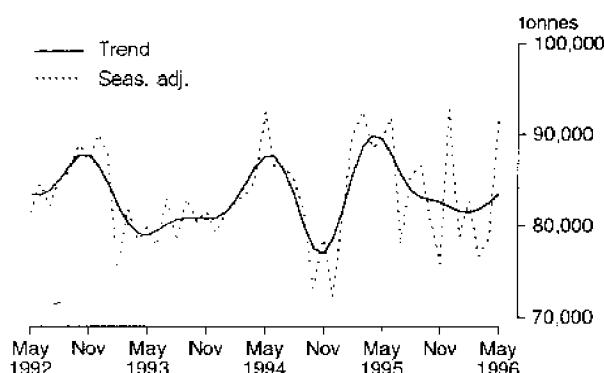
For footnotes see page 23

M

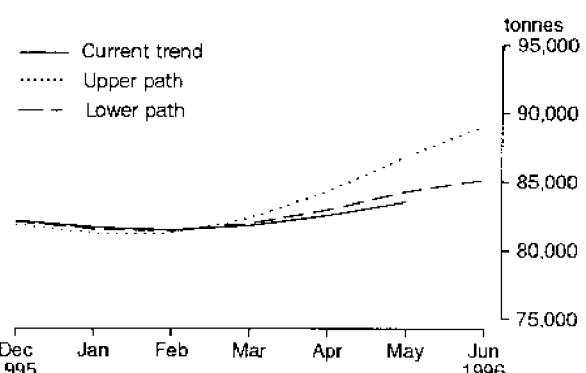
MONTHLY PRODUCTION continued

LONGER TERM TREND(a)

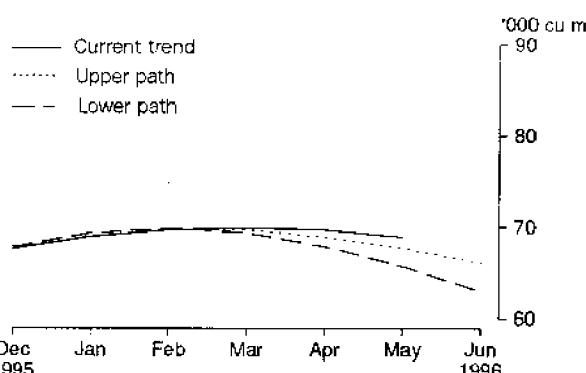
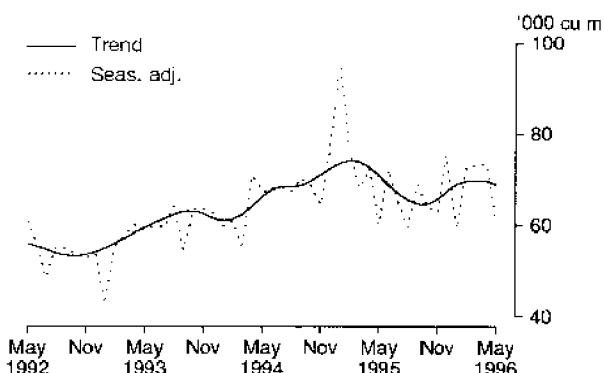
M22 WOOD PULP (seas. adj. series average movement 4%)



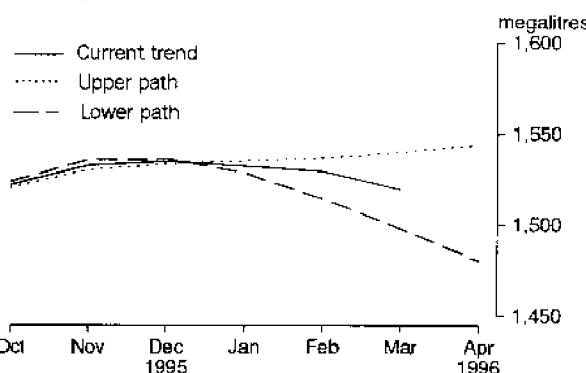
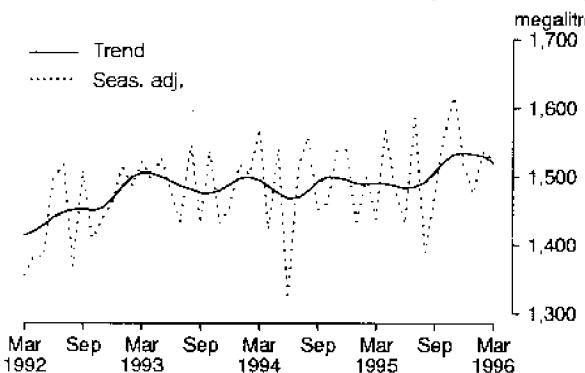
SHORT-TERM SENSITIVITY ANALYSIS



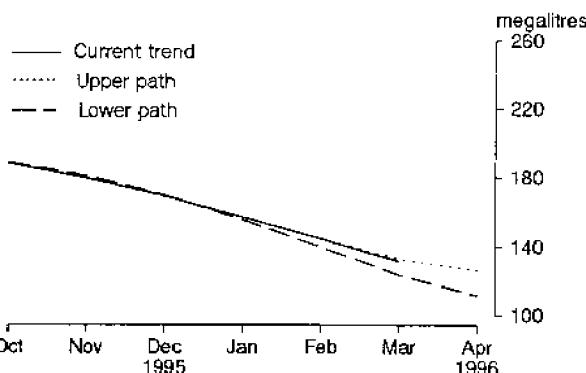
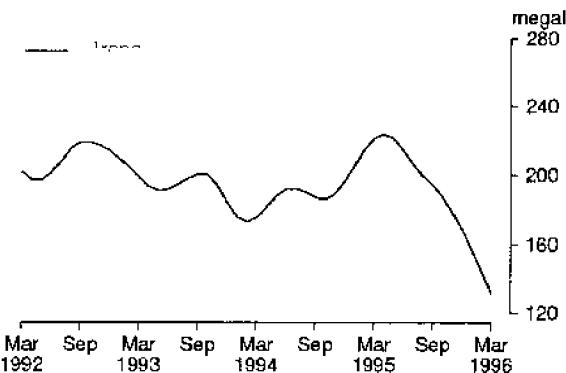
M23 UNLAMINATED PARTICLE BOARD (seas. adj. series average movement 6%)



M26 AUTOMOTIVE GASOLINE(f) (seas. adj. series average movement 5%)



M27 FUEL OIL(f) (seas. adj. series average movement 14%)



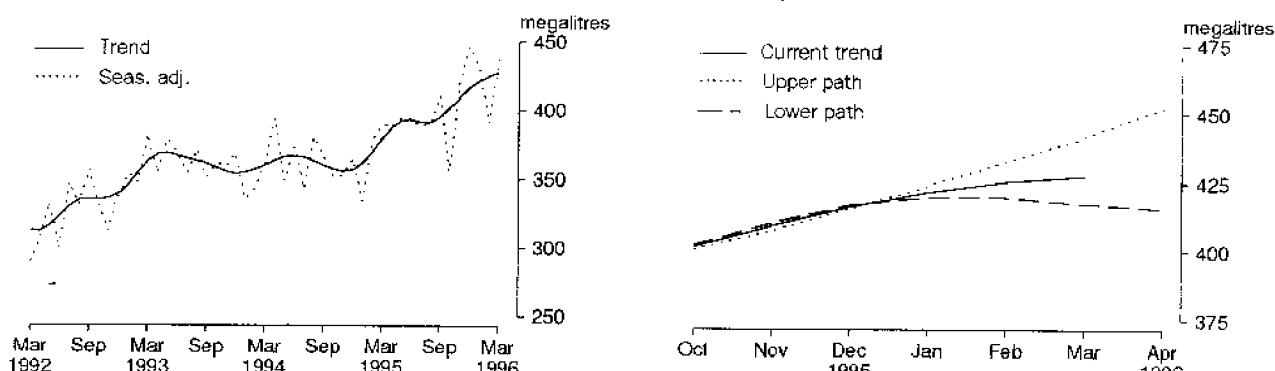
For footnotes see page 23

MMONTHLY PRODUCTION *continued*

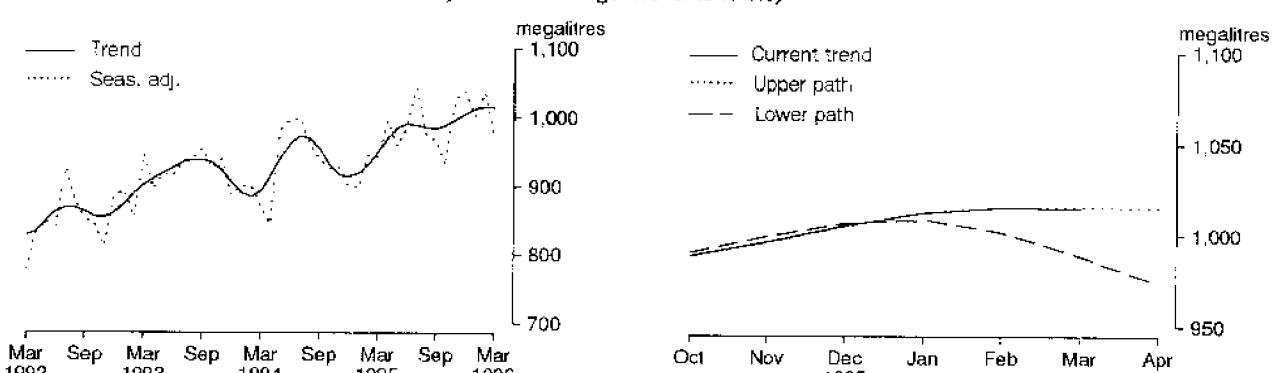
LONGER TERM TREND(a)

SHORT-TERM SENSITIVITY ANALYSIS

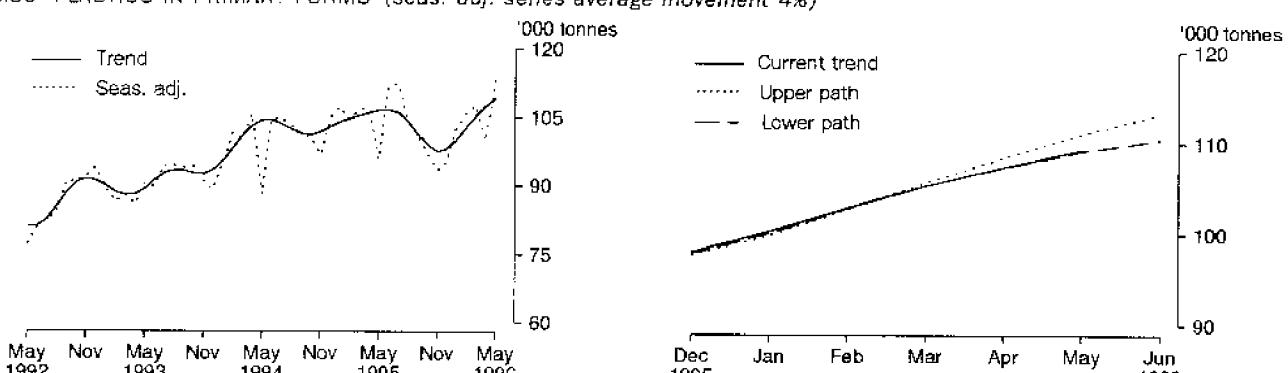
M28 AVIATION TURBINE FUEL(f) (seas. adj. series average movement 9%)



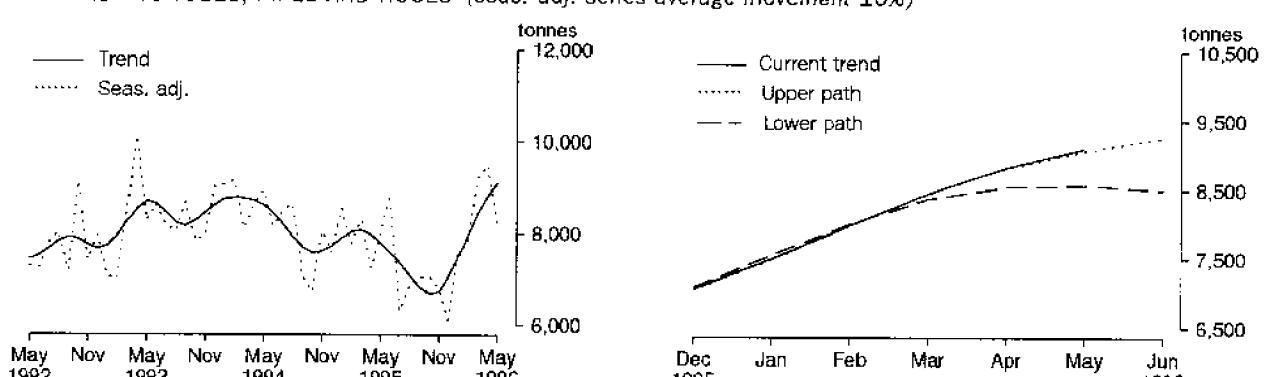
M29 AUTOMOTIVE DIESEL OIL(f) (seas. adj. series average movement 5%)



M30 PLASTICS IN PRIMARY FORMS (seas. adj. series average movement 4%)



M31 RIGID PVC TUBES, PIPES AND HOSES (seas. adj. series average movement 10%)



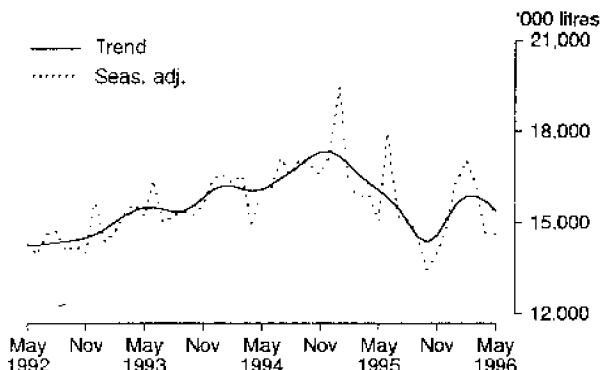
For footnotes see page 23

M

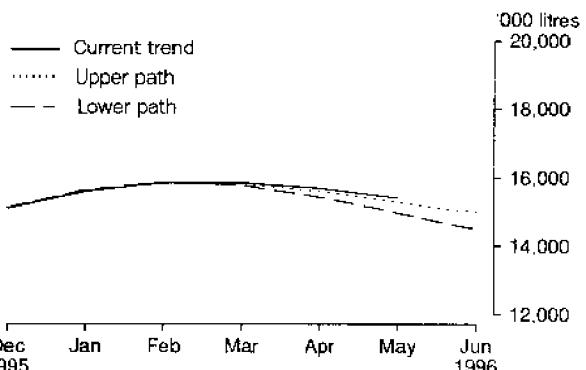
MONTHLY PRODUCTION continued

LONGER TERM TREND(a)

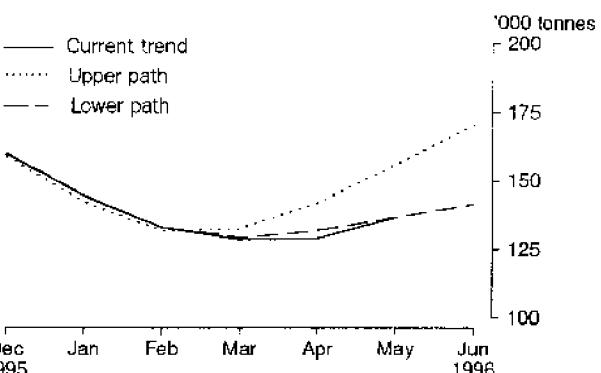
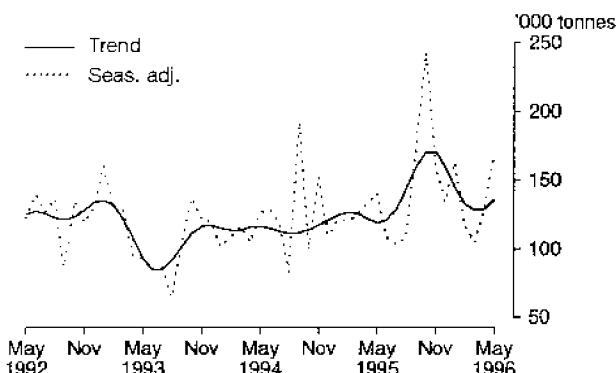
M33 PAINT (seas. adj. series average movement 4%)



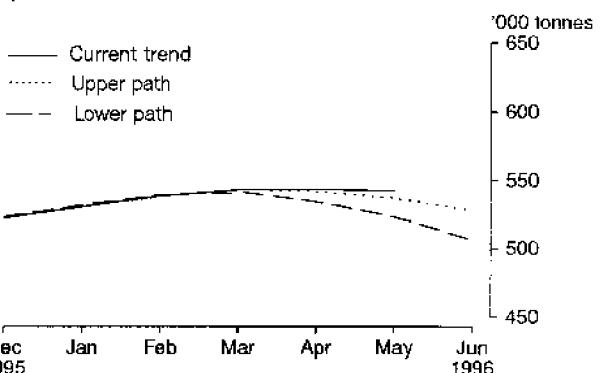
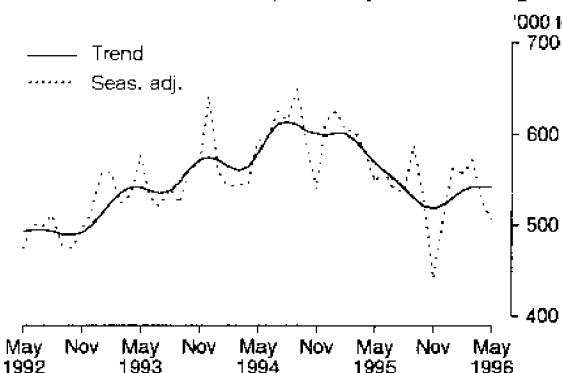
SHORT-TERM SENSITIVITY ANALYSIS



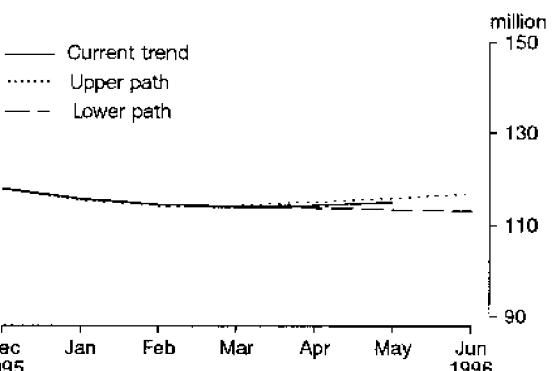
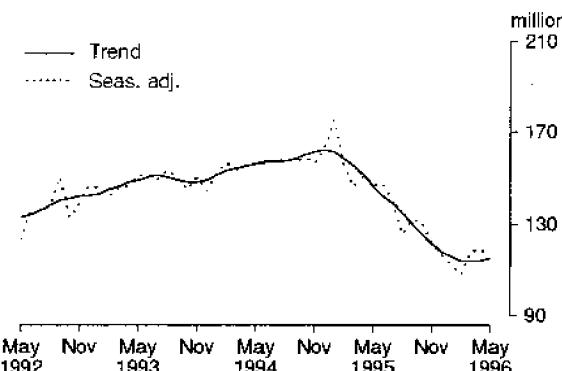
M34 SUPERPHOSPHATES (seas. adj. series average movement 15%)



M35 PORTLAND CEMENT (seas. adj. series average movement 5%)



M36 CLAY BRICKS (seas. adj. series average movement 4%)



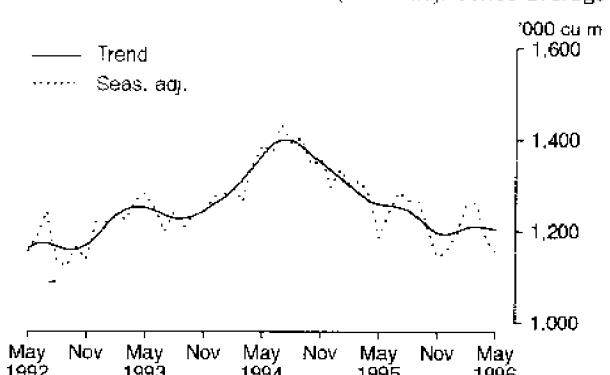
For footnotes see page 23

M

MONTHLY PRODUCTION continued

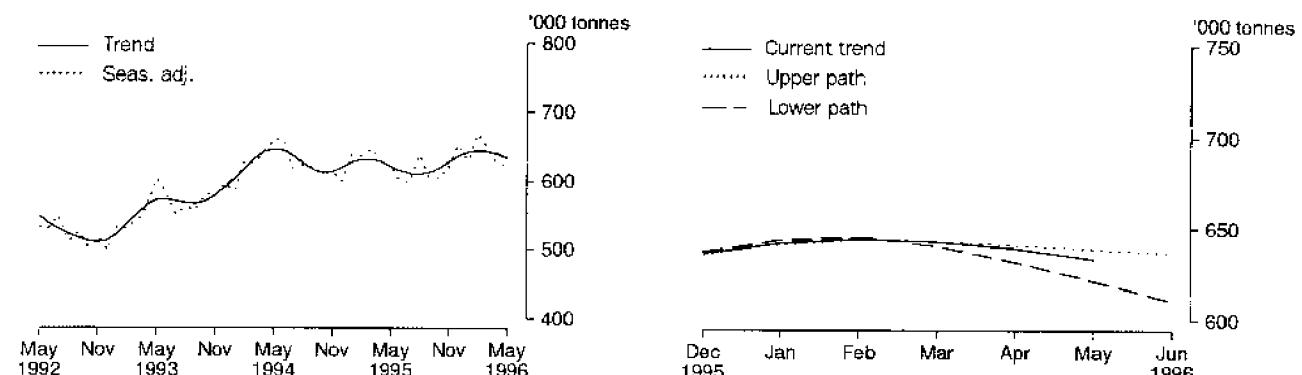
LONGER TERM TREND(a)

M37 READY MIXED CONCRETE (seas. adj. series average movement 4%)

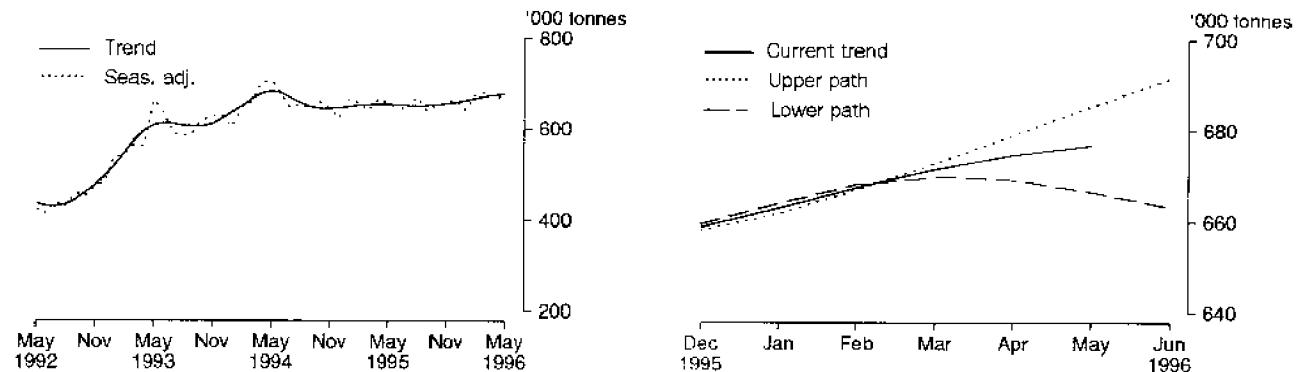


SHORT-TERM SENSITIVITY ANALYSIS

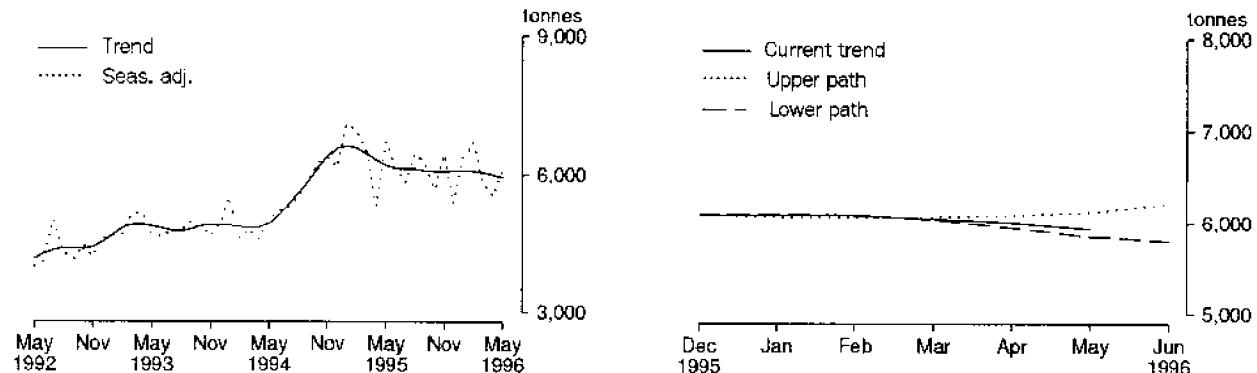
M38 BASIC IRON, SPIEGELEISEN AND SPONGE IRON(g) (seas. adj. series average movement 5%)



M39 BLOOMS AND SLABS OF IRON OR STEEL(g) (seas. adj. series average movement 5%)



M40 INSULATED WIRE (seas. adj. series average movement 8%)



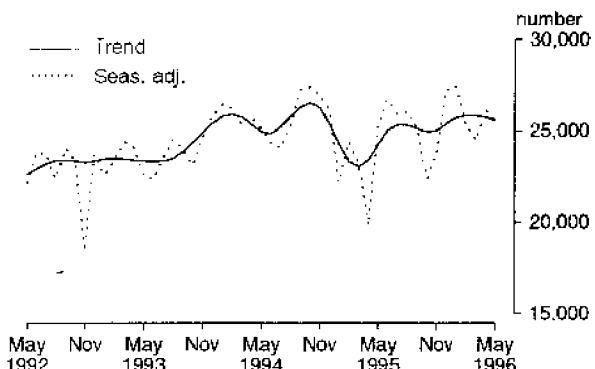
For footnotes see page 23

M

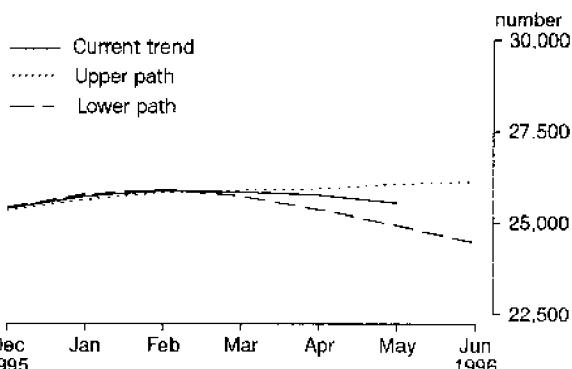
MONTHLY PRODUCTION continued

LONGER TERM TREND(a)

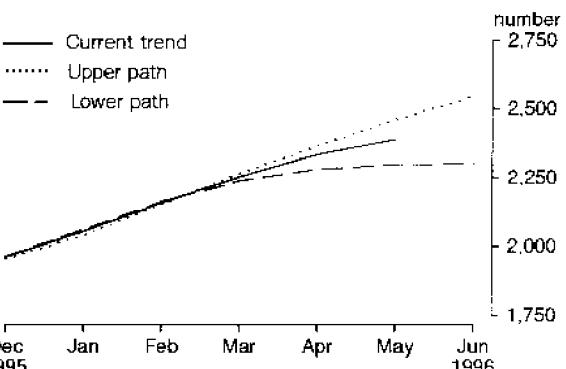
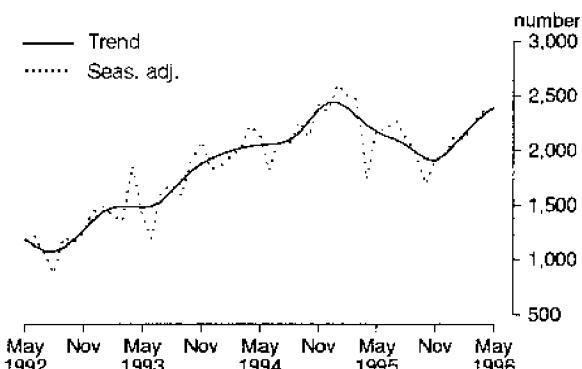
M41 CARS AND STATION WAGONS (seas. adj. series average movement 8%)



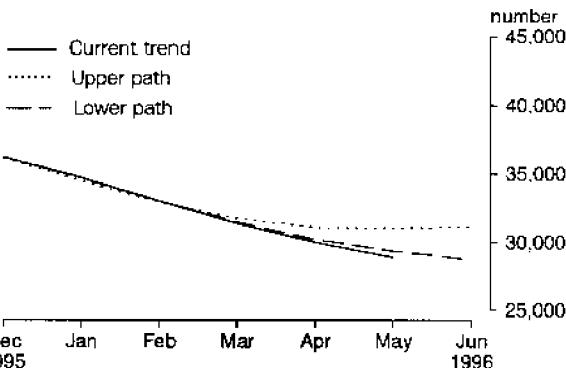
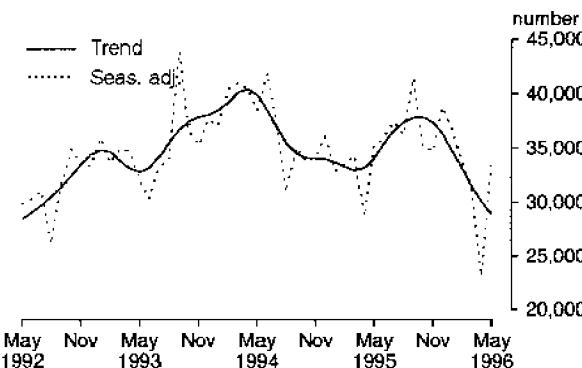
SHORT-TERM SENSITIVITY ANALYSIS



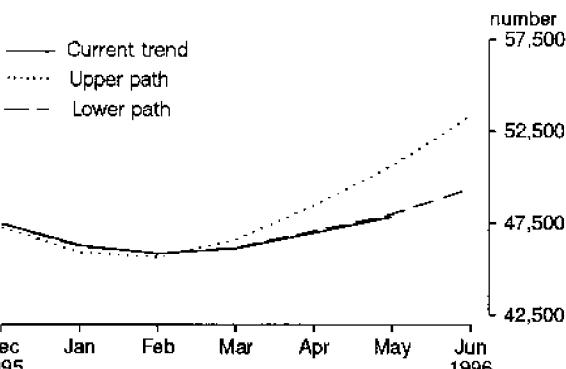
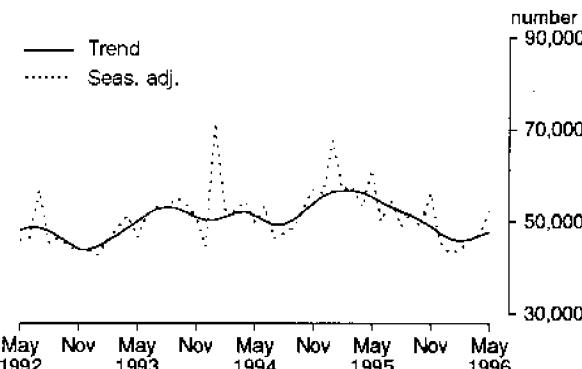
M42 VEHICLES FOR GOODS AND MATERIALS (seas. adj. series average movement 11%)



M44 DOMESTIC REFRIGERATORS (seas. adj. series average movement 8%)



M45 WATER HEATERS (seas. adj. series average movement 9%)



For footnotes see page 23

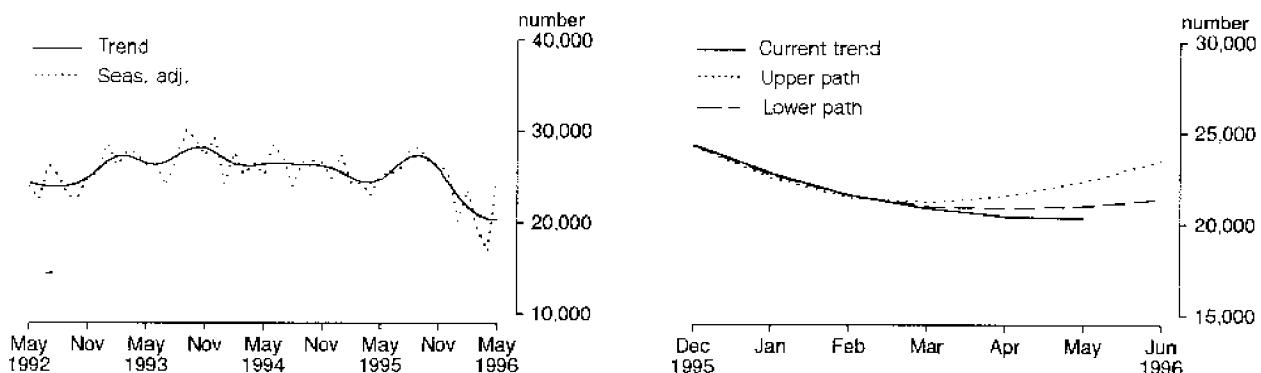
M

MONTHLY PRODUCTION continued

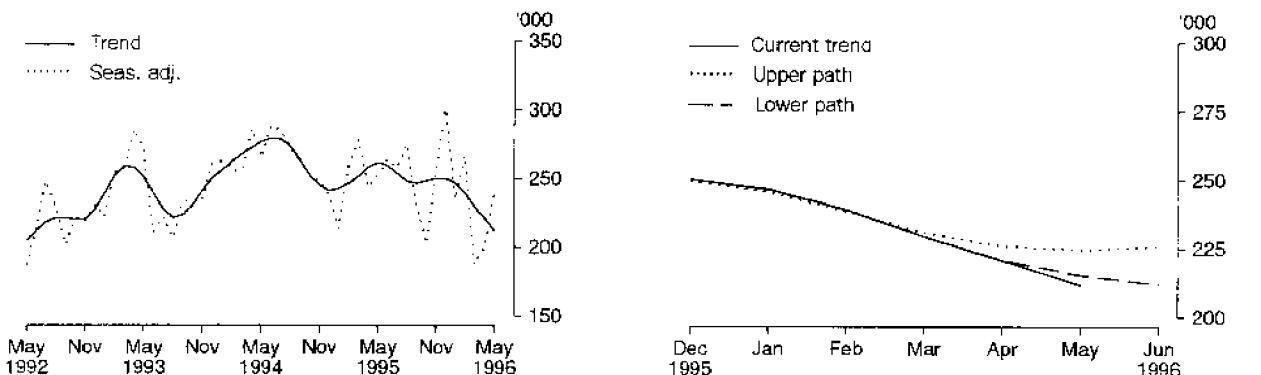
LONGER TERM TREND(a)

SHORT-TERM SENSITIVITY ANALYSIS

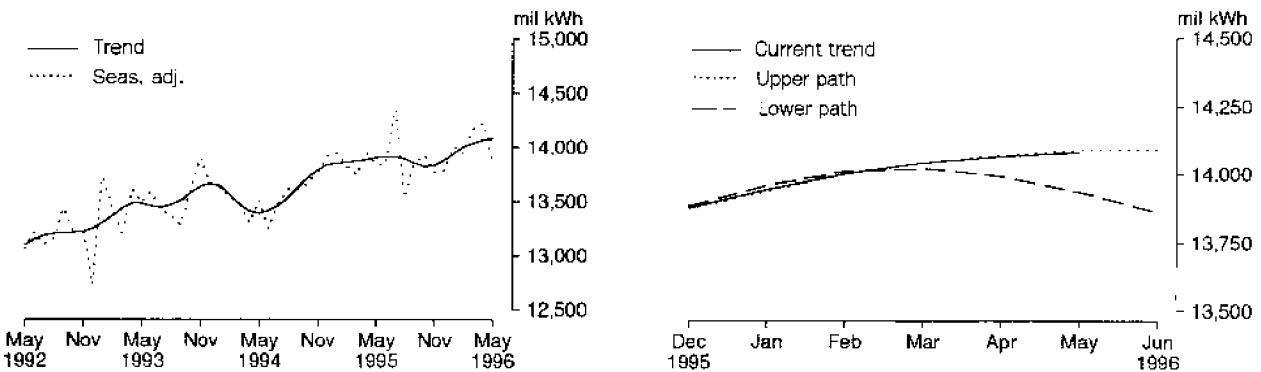
M46 DOMESTIC CLOTHES WASHING MACHINES (seas. adj. series average movement 9%)



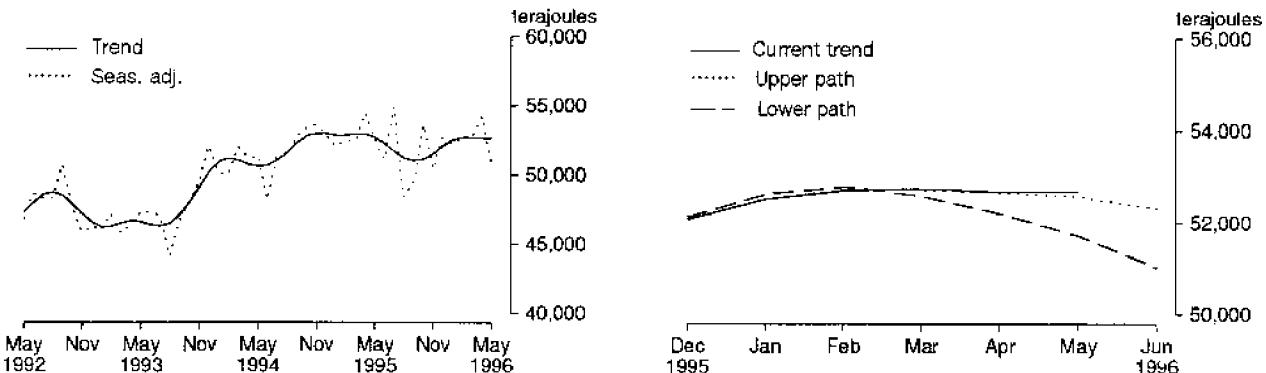
M47 ELECTRIC MOTORS (seas. adj. series average movement 7%)



M48 ELECTRICITY (Seas. adj. series average movement 1%)



M49 GAS (Seas. adj. series average movement 3%)



For footnotes see page 23

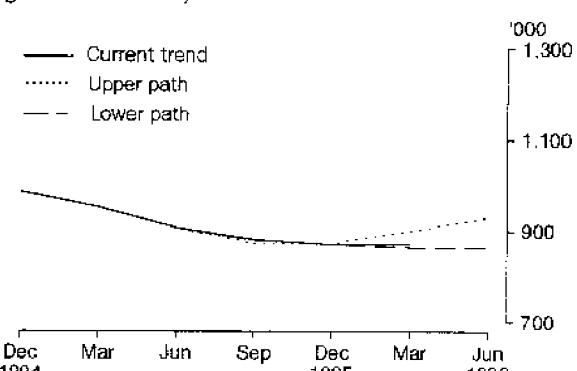
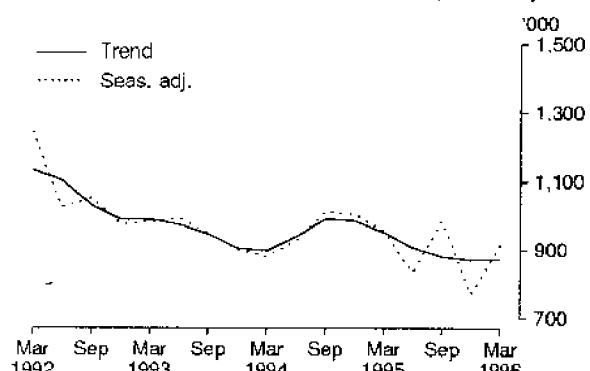
Q

QUARTERLY PRODUCTION

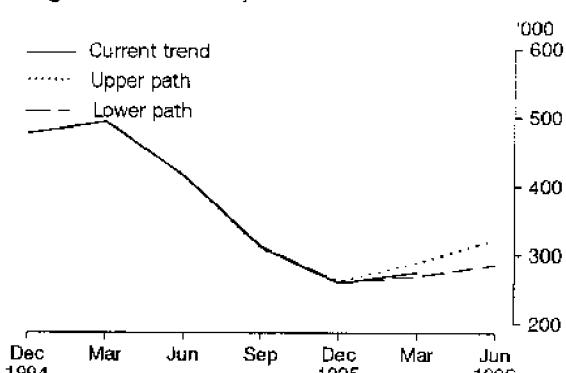
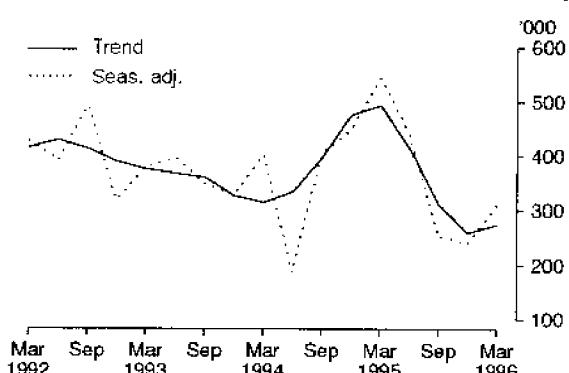
LONGER TERM TREND(a)

SHORT-TERM SENSITIVITY ANALYSIS

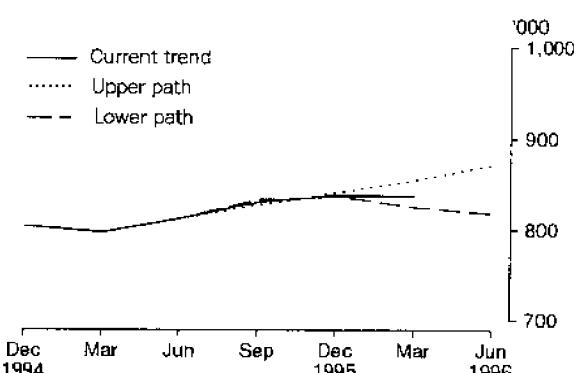
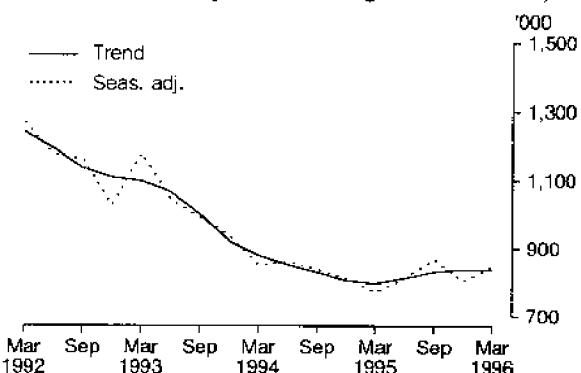
Q1 MEN'S AND BOYS' LONG TROUSERS (seas. adj. series average movement 7%)



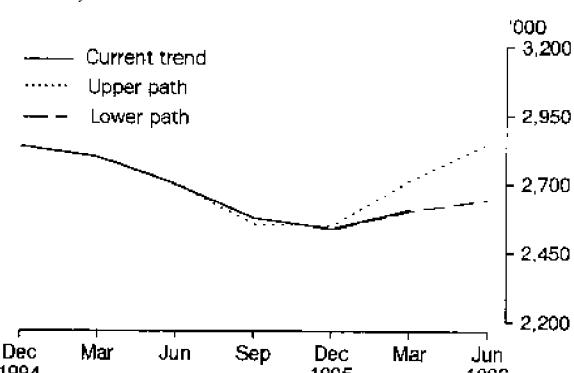
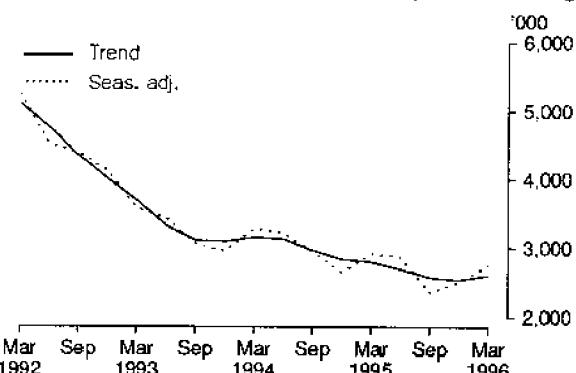
Q2 WOMEN'S AND GIRLS' LONG TROUSERS (seas. adj. series average movement 11%)



Q3 JEANS (Seas. adj. series average movement 6%)



Q4 MEN'S AND BOYS' SHIRTS (seas. adj. series average movement 7%)



For footnotes see page 23

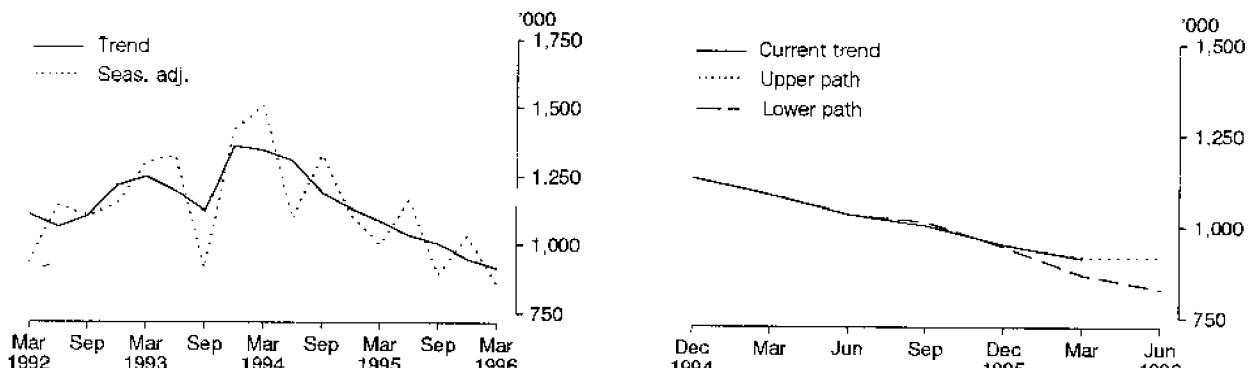
Q

QUARTERLY PRODUCTION continued

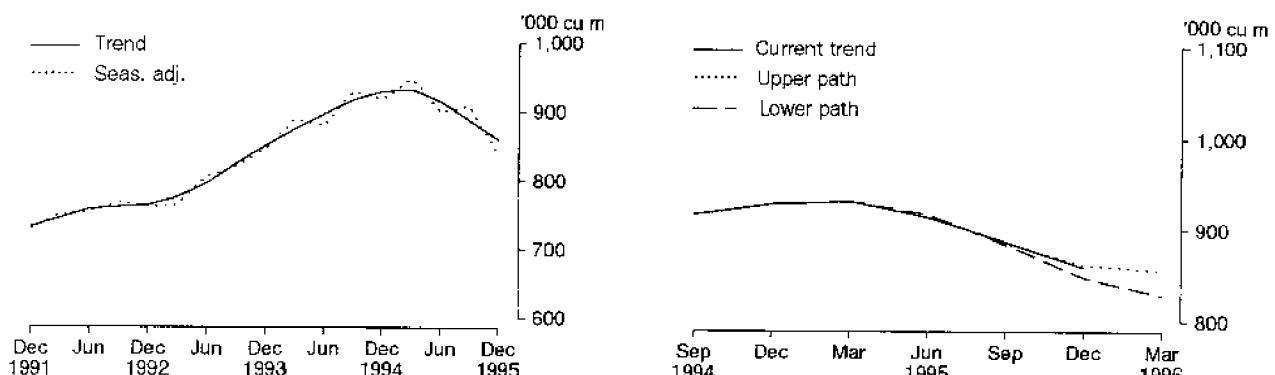
LONGER TERM TREND(a)

SHORT-TERM SENSITIVITY ANALYSIS

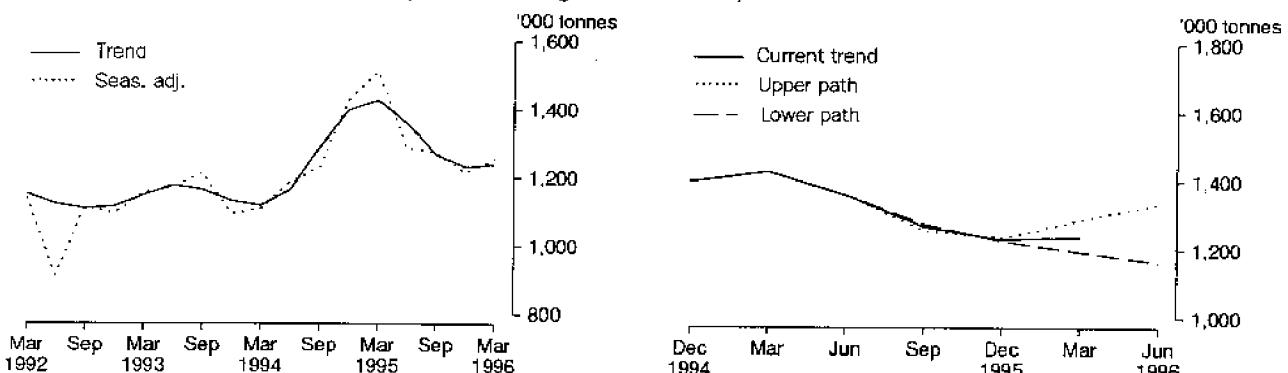
Q5 WOMEN'S SHIRTS AND BLOUSES (seas. adj. series average movement 11%)



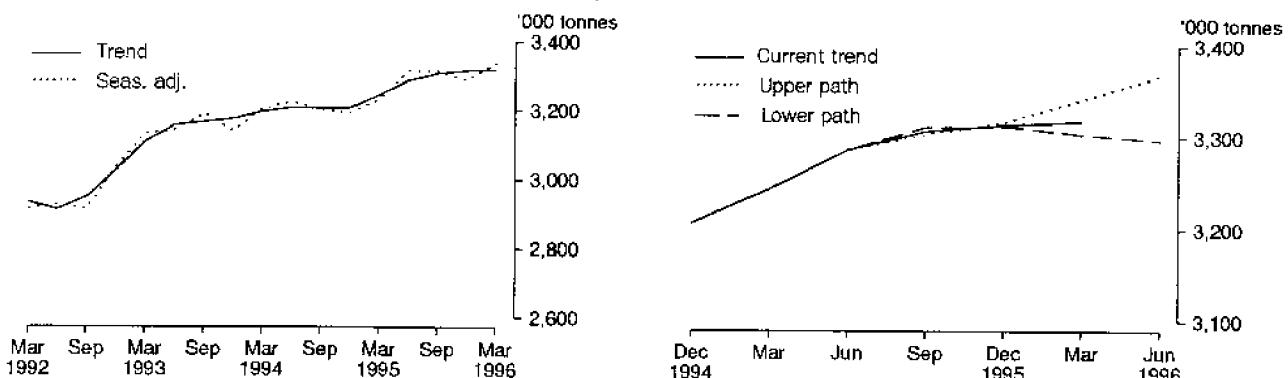
Q6 UNDRESSED SAWN TIMBER(f) (seas. adj. series average movement 3%)



Q7 HARDWOOD WOODCHIPS (seas. adj. series average movement 7%)



Q8 ALUMINA(f) (seas. adj. series average movement 2%)



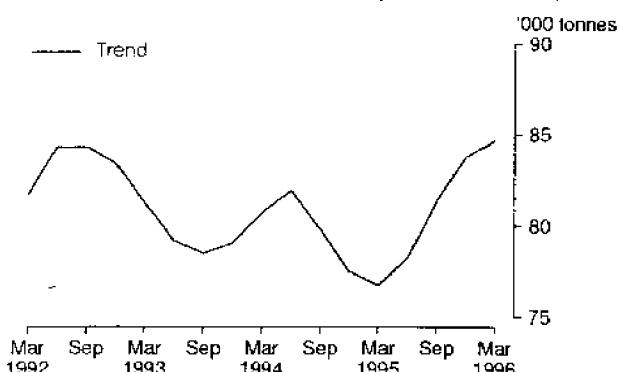
For footnotes see page 23

Q

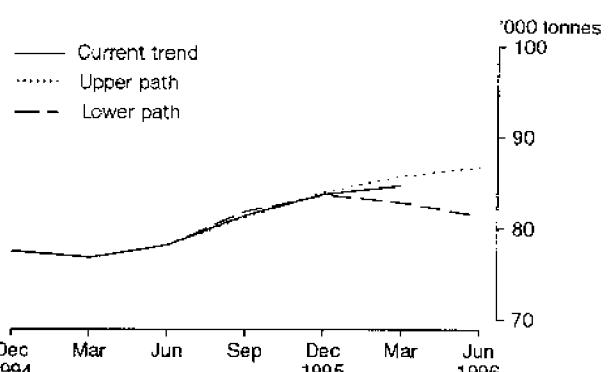
QUARTERLY PRODUCTION continued

LONGER TERM TREND(a)

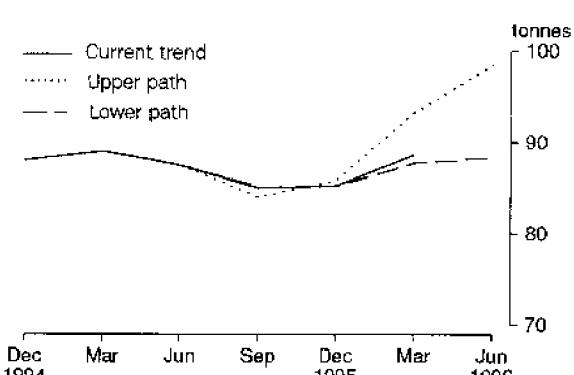
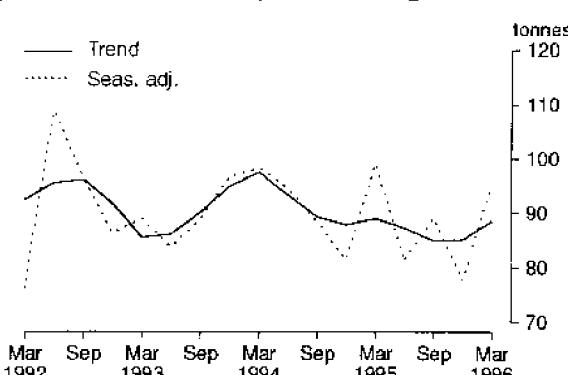
Q9 ZINC(f) (seas. adj. series average movement 6%)



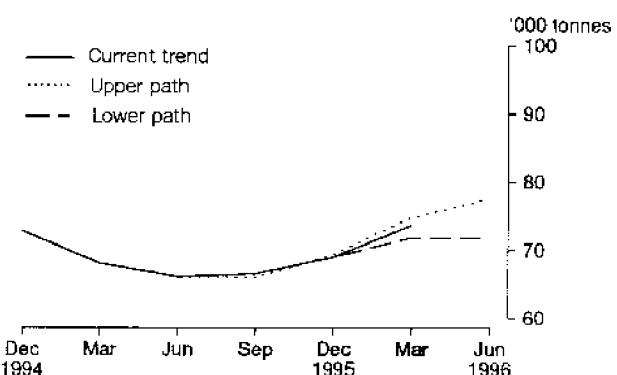
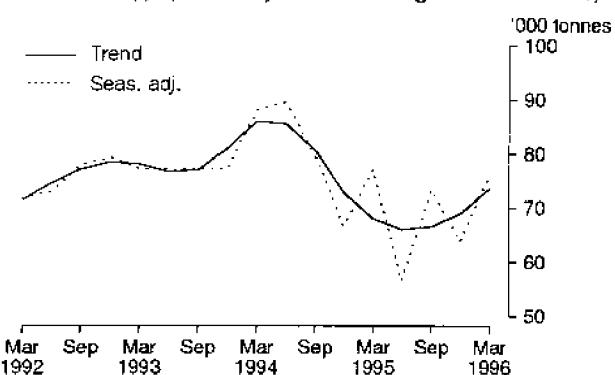
SHORT-TERM SENSITIVITY ANALYSIS



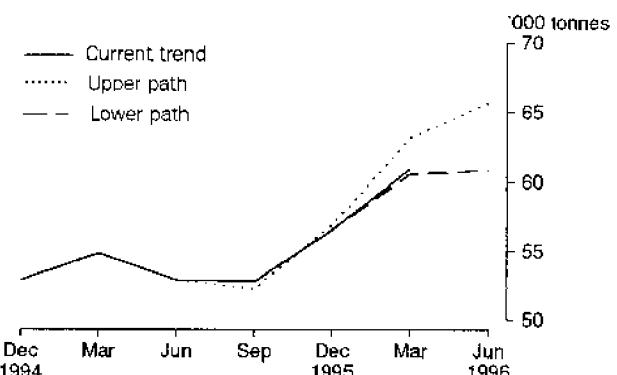
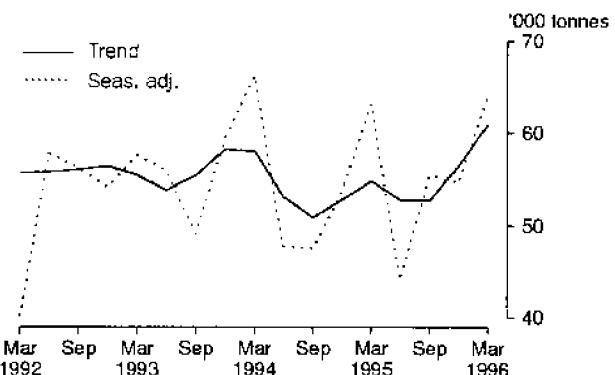
Q10 SILVER(f) (seas. adj. series average movement 10%)



Q11 COPPER(f) (seas. adj. series average movement 7%)



Q12 LEAD(f) (seas. adj. series average movement 7%)



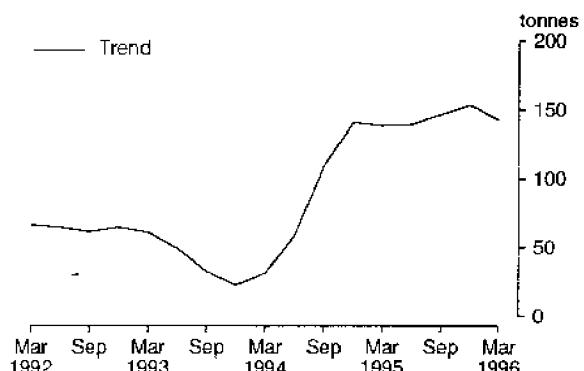
For footnotes see page 23

Q

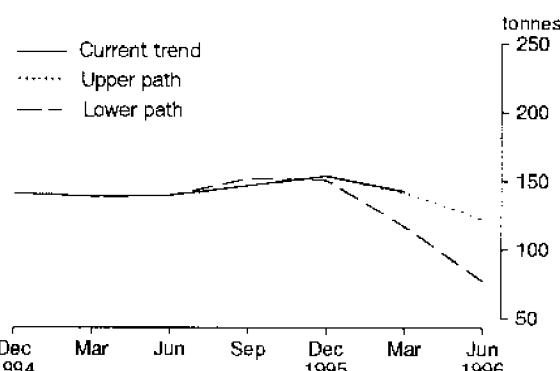
QUARTERLY PRODUCTION continued

LONGER TERM TREND(a)

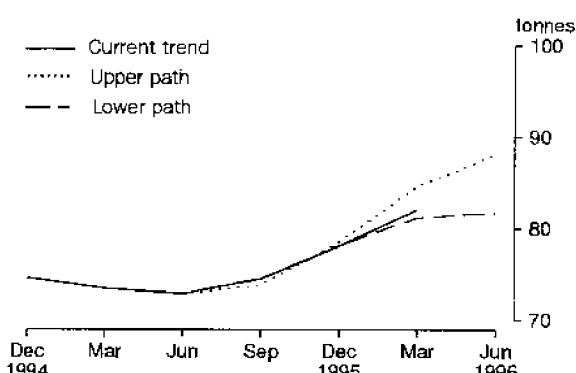
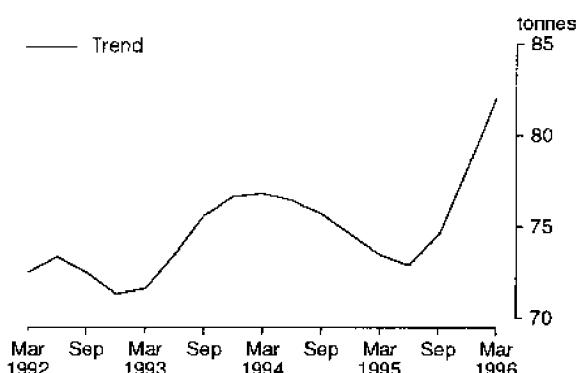
Q13 TIN(f) (seas. adj. series average movement 47%)



SHORT-TERM SENSITIVITY ANALYSIS



Q14 GOLD(f) (seas. adj. series average movement 7%)



Percentage
changes between
latest month
shown and-

No.	Item	Series (a)	Unit	1995				1996				prev. month	same month prev. year
				Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.		
M17	Wool woven fabric(h)	Orig. S. adj. Trend	'000 sq m	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.
M18	Textile floor coverings	Orig. S. adj. Trend	"	3,656	4,057	3,192	3,046	2,483	4,057	3,855	3,456	3,615	4.6
M19	Footwear(e)	Orig. S. adj. Trend	'000 pairs	1,469	1,463	1,381	1,029	756	1,326	1,339	1,183	1,343	13.5
M21	Newsprint	Orig. S. adj. Trend	tonnes	33,033	36,142	38,931	36,733	38,631	40,350	36,111	34,818	40,194	15.4
M22	Wood pulp	Orig. S. adj. Trend	"	34,990	35,720	38,623	37,718	36,617	39,909	35,231	32,797	39,133	-2.3
M23	Unlaminated particle board	Orig. S. adj. Trend	"	37,224	37,126	37,131	37,256	37,249	36,999	36,672	36,388	36,136	-0.7
M25	Paperboard containers	Orig. S. adj. Trend	'000 tonnes	93,992	99,194	106,031	82,823	86,695	90,553	91,749	84,024	88,295	5.1
M26	Automotive gasoline(f)	Orig. S. adj. Trend	megalitres	1,453	1,528	1,487	1,537	1,561	1,463	1,529	n.y.a.	n.y.a.	4.5
M27	Fuel oil(f)	Orig. S. adj. Trend	"	1,472	1,560	1,617	1,517	1,476	1,537	1,523	n.y.a.	n.y.a.	-0.9
M28	Aviation turbine fuel(f)	Orig. S. adj. Trend	"	1,507	1,522	1,532	1,534	1,532	1,529	1,519	n.y.a.	n.y.a.	-0.6
M29	Automotive diesel oil(f)	Orig. S. adj. Trend	"	232	156	164	209	129	139	126	n.y.a.	n.y.a.	-9.8
M30	Plastics in primary forms	Orig. S. adj. Trend	"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	-54.2
M31	Rigid PVC tubes, pipes and hoses	Orig. S. adj. Trend	tonnes	403	400	430	463	452	398	414	n.y.a.	n.y.a.	12.6
M32	Polyethylene bottles up to two litres	Orig. S. adj. Trend	"	411	355	420	447	431	391	437	n.y.a.	n.y.a.	11.9
M33	Paint	Orig. S. adj. Trend	"	395	402	409	416	422	425	428	n.y.a.	n.y.a.	12.3
M34	Superphosphates	Orig. S. adj. Trend	'000 tonnes	946	956	1,011	1,119	1,049	980	953	n.y.a.	n.y.a.	0.5
			"	967	930	1,027	1,038	1,002	1,038	974	n.y.a.	n.y.a.	3.4
			"	984	988	996	1,005	1,012	1,015	1,015	n.y.a.	n.y.a.	-0.1
			"	104	108	96	85	98	102	108	100	113	12.8
			"	101	97	93	95	103	106	108	100	114	13.7
			"	101	99	97	98	100	103	105	107	109	2.7
			"	6,612	7,058	7,649	5,588	4,479	8,753	9,229	7,599	9,608	26.4
			"	7,029	7,076	6,774	6,127	7,506	7,859	9,178	9,511	8,219	-13.6
			"	6,825	6,674	6,737	7,053	7,496	7,982	8,446	8,821	9,112	3.3
			"	123	125	121	147	119	129	140	109	115	5.6
			"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
			"	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
			"	14,585	13,459	14,002	14,753	16,357	17,051	16,298	14,671	14,603	-0.5
			"	14,526	14,357	14,589	15,097	15,598	15,853	15,855	15,692	15,401	-1.9
			"	89	166	183	162	208	171	161	156	174	12.0
			"	172	243	159	135	163	117	105	129	171	32.6
			"	160	171	171	160	144	133	129	129	137	5.8
			"	15.3									

For footnotes see page 23

No.	Item	Series (a)	Unit	1994				1995				1996		Percentage changes between latest quarter shown and-	
				Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	prev. quarter	same quarter prev. year	
				759	1,048	1,039	987	822	944	1,013	756	788	4.1	-4.2	
Q1	Men's and boys' long trousers	Orig.	'000	759	1,048	1,039	987	822	944	1,013	756	788	4.1	-4.2	
		S. adj.	"	881	927	1,012	1,005	956	835	986	770	916	18.9	-4.2	
		Trend	"	898	939	991	986	952	906	880	870	872	0.2	-8.5	
Q2	Women's and girls' long trousers	Orig.	"	461	188	407	380	628	443	252	202	359	77.6	-42.8	
		S. adj.	"	403	187	405	450	545	442	252	240	310	29.3	-43.0	
		Trend	"	314	334	397	476	493	415	310	259	275	5.9	-44.3	
Q3	Jeans	Orig.	"	709	945	941	770	641	887	979	764	706	-7.6	10.1	
		S. adj.	"	852	864	837	810	772	811	870	803	851	5.9	10.2	
		Trend	"	879	852	830	804	797	812	831	838	838	0.0	5.2	
Q4	Men's and boys' shirts	Orig.	"	2,623	2,867	3,545	2,900	2,347	2,554	2,841	2,741	2,231	18.6	-5.0	
		S. adj.	"	3,280	3,208	2,940	2,642	2,916	2,861	2,357	2,502	2,761	10.4	-5.3	
		Trend	"	3,157	3,127	2,954	2,835	2,795	2,696	2,575	2,536	2,606	2.8	-6.8	
Q5	Women's shirts and blouses	Orig.	"	1,218	812	1,787	1,218	806	864	1,202	1,132	690	-39.0	-14.4	
		S. adj.	"	1,506	1,092	1,326	1,107	998	1,163	891	1,029	855	-17.0	-14.4	
		Trend	"	1,341	1,304	1,189	1,131	1,084	1,032	1,001	948	913	-3.7	-15.8	
Q6	Undressed sawn timber(f)	Orig.	'000 cu m	827	905	967	916	883	925	946	834	n.y.a.	-11.8	-9.0	
		S. adj.	"	889	880	929	917	948	900	908	836	n.y.a.	-8.0	-8.8	
		Trend	"	875	896	916	928	932	914	887	859	n.y.a.	-3.2	-7.5	
Q7	Hardwood woodchips	Orig.	'000 tonnes	1,026	1,228	1,286	1,417	1,402	1,332	1,334	1,203	1,163	-3.3	-17.1	
		S. adj.	"	1,108	1,188	1,228	1,428	1,512	1,288	1,273	1,214	1,253	3.2	-17.1	
		Trend	"	1,118	1,164	1,289	1,400	1,428	1,359	1,267	1,231	1,238	0.5	-13.3	
Q8	Alumina(f)	Orig.	"	3,172	3,209	3,235	3,203	3,203	3,299	3,348	3,297	3,311	0.4	3.4	
		S. adj.	"	3,205	3,225	3,200	3,192	3,231	3,314	3,313	3,288	3,337	1.5	3.3	
		Trend	"	3,195	3,207	3,204	3,207	3,244	3,286	3,307	3,314	3,318	0.1	2.3	
Q9	Zinc(f)	Orig.	"	82	81	82	78	72	81	82	85	81	-4.7	12.5	
		S. adj.	"	n.a.	n.a.	n.a.									
		Trend	"	81	82	80	78	77	78	81	84	85	1.1	10.4	
Q10	Silver(f)	Orig.	tonnes	91	104	88	79	93	89	89	75	90	20.0	-3.2	
		S. adj.	"	98	95	88	81	99	81	89	78	95	22.6	-3.8	
		Trend	"	97	93	89	88	89	87	85	85	89	4.0	-0.4	
Q11	Copper(f)	Orig.	'000 tonnes	81	87	87	68	71	55	80	65	70	7.7	-1.4	
		S. adj.	"	88	90	80	67	77	57	73	64	76	19.0	-1.5	
		Trend	"	86	86	81	73	68	66	67	69	74	6.7	8.2	
Q12	Lead(f)	Orig.	"	55	53	49	55	53	49	57	56	54	-3.6	1.9	
		S. adj.	"	66	48	48	54	63	44	56	55	64	17.3	1.4	
		Trend	"	58	53	51	53	55	53	53	57	61	7.9	11.2	
Q13	Tin(f)	Orig.	tonnes	18	90	75	135	180	65	165	160	89	-44.4	-50.6	
		S. adj.	"	n.a.	n.a.	n.a.									
		Trend	"	31	59	110	141	138	139	146	153	142	-7.3	2.8	
Q14	Gold(f)	Orig.	"	75	79	78	71	74	74	75	75	85	12.8	14.3	
		S. adj.	"	n.a.	n.a.	n.a.									
		Trend	"	77	76	76	75	73	73	74	78	82	5.0	11.8	

(a) Trend estimates shown may have been revised. See Explanatory Note 13.

(b) Source: Australian Dairy Corporation.

(c) Source: Australian Tobacco Marketing Committee, until April 1995.

(d) Recent movements in this series have caused some uncertainty in its trend estimates from September 1995. Although these changes may be sustained, a larger span of data is required before the final trend for this series can be determined.

(e) The series 'M19 Footwear (excluding sports footwear)' and 'M20 Sports footwear' have been combined, and are now shown as 'M19 Footwear'.

(f) Source: Australian Bureau of Agricultural and Resource Economics (ABARE).

(g) This data item comprises production of BHP Steel only.

(h) Data in this series are subject to significant revisions and will be published when those revisions are available.

EXPLANATORY NOTES

INTRODUCTION

1 This publication presents monthly and quarterly estimates of production of selected major manufacturing indicators for Australia.

SCOPE AND COVERAGE

2 Data presented in this publication are collected from a number of different sources. The prime source is the ABS surveys of manufacturing production. Data are also obtained from surveys undertaken by the Australian Bureau of Agricultural and Resource Economics (ABARE), the Australian Dairy Corporation (ADC), the Australian Tobacco Marketing Committee (until April 1995) and from ABS agriculture collections. Scope and coverage varies slightly depending on the source of the information.

3 Where production statistics are collected by the ABS manufacturing production surveys, they are not collected from single establishment manufacturing businesses with less than four persons employed nor from establishments predominantly engaged in non-manufacturing activities but which may carry out some manufacturing in a minor way. 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.

4 The statistics on meat production include data collected from abattoirs and other major slaughtering establishments and include estimates of animals slaughtered on farms and by country butchers and other small slaughtering establishments for human consumption.

5 The statistics on chicken meat have been collected from commercial poultry slaughtering establishments. Producers in Tasmania, the Northern Territory and the Australian Capital Territory and the very small producers are excluded from the collection.

6 Data on the production of fuels, sawn timber and quarterly estimates of base metal production are obtained from the Australian Bureau of Agricultural and Resource Economics publications *Mineral Statistics* and *Forest Products Statistics*.

7 Data on the production of cheese and butter are obtained from the Australian Dairy Corporation publication *Dairystats*. Data on tobacco and cigarettes produced were obtained from the Australian Tobacco Marketing Committee until April 1995.

COMPARABILITY WITH OTHER ESTIMATES

8 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.

9 The production statistics collected monthly and quarterly referred to in paragraph 1 account, in total, for less than half of the output of the manufacturing sector. For information on general trends in the manufacturing sector, refer to the publication referred to in paragraph 8.

SEASONALLY ADJUSTED AND TREND ESTIMATES

10 Seasonally adjusted statistics are shown for most of 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 or quarters. Details of the methods used in seasonally adjusting these series are available on request.

11 Seasonal adjustment procedures do not aim to remove the irregular or non-seasonal influences which may be present in any particular month or quarter, 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.

12 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 monthly and a 7-term moving average to the quarterly seasonally adjusted series. The 7- and 13-term Henderson averages (like all Henderson averages) are symmetric but, as the end of a time series is approached, asymmetric forms of the average are applied. Unlike the weights of the standard 7-term Henderson moving average, the surrogate weights employed with the quarterly data have been tailored to suit the particular characteristics of individual series.

13 While the asymmetric weights enable trend estimates for recent months or quarters to be produced, it does result in revisions to the estimates for the most recent months or quarters as additional observations become available. Generally, subsequent revisions become smaller and after 3 months or 2 quarters 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.

14 Users may wish to refer to the ABS Information Paper *A Guide to Interpreting Time Series - Monitoring 'Trends', an overview* (1348.0) for more detailed information on smoothing of seasonally adjusted time series data.

RELATED PUBLICATIONS

15 Other ABS publications which may be of interest are

- *International Trade, Australia: FASTTRACCS Service – Hardcopy Reports* (5461.0)
- *Stocks, Selected Industry Sales and Expected Sales, Australia* (5629.0) issued quarterly
- *Livestock products, Australia* (7215.0) issued monthly
- *Quarterly Indexes of Industrial Production, Australia* (8125.0)
- *Manufacturing Industry, Australia: Preliminary* (8201.0) issued annually

- *Information Paper: Availability of Statistics Related to Manufacturing, 1996* (8205.0), released on 21 March 1996
- *Manufacturing Industry, Australia* (8221.0) issued annually
- *Manufacturing Production, Australia: Principal Commodities Produced, 1989-90* (8365.0)
- *The Australian Mining Industry, Australia* (8414.0) issued annually

UNPUBLISHED STATISTICS

16 Additional manufacturing production data are collected by the ABS through user funded surveys and are available to users as a special data service. These series are:

domestic refrigerators
 domestic deep-freezers
 water heaters
 clothes drying machines
 domestic cooking stoves, ovens and ranges
 space heaters
 mowers
 air conditioners
 audio cassette tapes
 audio compact discs
 liquid supply or production meters
 brass bars, rods and sections
 strip for retreading rubber tyres
 electricity
 gas
 semi-trailers
 mineral waters and aerated waters
 starches, wheat gluten and glucose
 beer
 ham and bacon and canned meat
 ready mixed concrete
 concrete blocks, bricks and pavers
 roof tiles
 clay bricks
 Portland cement
 mattresses and mattress supports
 knitted underwear
 foundation garments
 footwear

A more detailed breakdown of most published series is also available as a special data service.

For further information, please call John Ridley on (02) 268 4541.

CURRENT PUBLICATIONS

17 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 *Release 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.

TECHNICAL NOTE

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 or quarter's trend estimates because they will be revised when the next month's or quarter's seasonally adjusted estimates become available. For further information, see Explanatory Notes 12 and 13.

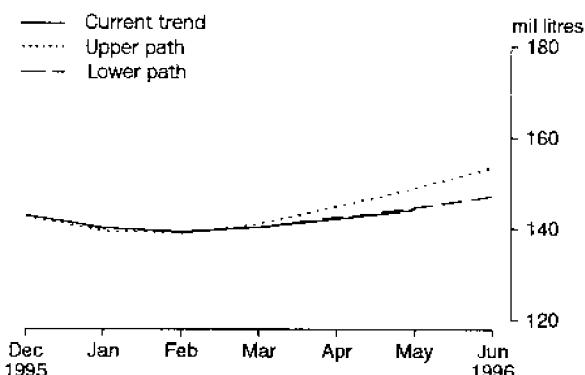
Example The graph below presents the effect of two possible scenarios on the current and previous trend estimates:

Upper path The June 1996 seasonally adjusted estimate of the production of beer is higher than the May 1996 seasonally adjusted estimate by 5%.

Lower path The June 1996 seasonally adjusted estimate of the production of beer is lower than the May 1996 seasonally adjusted estimate by 5%.

The percentage change of 5% was chosen because the average monthly absolute percentage change for this series since January 1965 has been 5%.

M11 BEER
(Seas. adj. series average movement 5%)



GLOSSARY

M1 Red meat	Includes veal, pork and buffalo.
M2 Chicken meat	Expressed in the dressed weight of whole birds, pieces and giblets.
M3 Cheese	Includes fresh cheeses such as ricotta, cottage, cream and quark.
M4 Butter	Includes direct butter oil.
M5 Flour of wheat or of meslin	Excludes self raising flour.
M6 Prepared foods from cereals	Prepared foods obtained by the swelling or roasting of cereals or cereal products.
M7 Biscuits	Sweet biscuits and other biscuits, waffles, wafers and ginger bread; excludes dog biscuits.
M8 Chocolate based confectionery	Includes confectionery containing chocolate; excludes chocolate biscuits and chocolate intended for further manufacturing.
M9 Other confectionery	Excludes chocolate based confectionery.
M10 Malt	Includes malt flour.
M11 Beer	Includes ale and stout; excludes low alcohol beer containing less than 1.15% but more than 0.5%, by volume of alcohol.
M12 Tobacco and cigarettes	Includes those containing tobacco substitutes.
M13 Man-made fibre woven fabric	Broadwoven fabric of, or predominantly of, synthetic staple fibres and/or filament.
M14 Cotton woven fabric	Broadwoven fabric of, or predominantly of, cotton; excludes gauze.
M15 Cotton yarn	Of, or predominantly of cotton, reported on a single yarn basis; excludes sewing thread.
M16 Wool yarn	Of, or predominantly of, wool or fine animal hair.
M17 Wool woven fabric	Broadwoven woollen and worsted fabrics of, or predominantly of, wool or fine animal hair.
M18 Textile floor coverings	Consisting of carpets, carpeting (excluding underfelt), floor rugs, mats and matting of, or predominantly of, textile materials.
M19 Footwear	Includes sports and waterproof footwear; excludes thongs.
M21 Newsprint	Excludes directory paper, mechanical and printing paper.
M22 Wood pulp	Expressed as air-dried weight.

M23 Unlaminated particle board	Particle or similar boards of wood or other ligneous materials whether or not for subsequent conversions to other purposes; excludes fibreboard and fibre paperboard.
M25 Paperboard containers	Includes corrugated paperboard and solid paperboard containers.
M26 Automotive gasoline	Produced by Australian refineries from imported and indigenous petroleum.
M27 Fuel oil	Oils derived from the distillation of petroleum which are generally used for domestic heating or fuelling furnaces; produced by Australian refineries from imported and indigenous petroleum.
M28 Aviation turbine fuel	Produced by Australian refineries from imported and indigenous petroleum.
M29 Automotive diesel oil	Produced by Australian refineries from imported and indigenous petroleum.
M30 Plastics in primary forms	Includes liquid, paste, powder, granules, flakes, blocks, irregular shapes, lumps and similar forms.
M31 Rigid PVC tubes, pipes and hoses	Plastic tubes, pipes and hose of rigid polyvinyl chloride.
M32 Polyethylene bottles up to two litres	Plastic bottles of polyethylene, up to and including two litres.
M33 Paint	Includes architectural, decorative and industrial enamels and clears, heavy duty coatings and wood stains; marine coatings are included from January 1995.
M34 Superphosphates	Expressed in terms of single super phosphate (9% P equivalent).
M35 Portland cement	Excludes portland cement clinker and portland cement used to make blended portland cement in-house.
M36 Clay bricks	Saleable bricks removed from kiln; excludes firebricks and bricks for other than structural purposes.
M37 Ready mixed concrete	Excludes production used or for use within the same business.
M38 Basic iron, spiegeleisen and sponge iron	In pigs, blocks and other primary forms; includes pig iron.
M39 Blooms and slabs of iron or steel	Continuous cast; includes steel in the molten state.
M40 Insulated wire	Includes cables and other insulated electrical conductors; excludes coaxial cables and automotive low voltage wire and ignition wiring sets.
M41 Cars and station wagons	Cars and station wagons for less than 10 persons; excludes mini-buses, passenger mini-vans.

M42	Vehicles for goods and materials	Excludes off-highway trucks, fork lift trucks and semi-trailers.
M43	Telephones	Excludes keyphones.
M44	Domestic refrigerators	One and two door models, includes combination refrigerator freezers.
M45	Water heaters	Includes solar.
M46	Domestic clothes washing machines	Of a dry linen capacity not exceeding 10 kilograms.
M47	Electric motors	Includes direct current generators; excludes motors and generators for motor vehicles and aircraft.
M48	Electricity	Excludes purchases or transfers in of electricity.
M49	Gas	Gas available for issue through mains, including natural gas.
Q1	Men's and boys' long trousers	Excludes jeans and waterproof trousers and trousers made as part of a complete suit.
Q2	Women's and girls' long trousers	Excludes jeans and waterproof trousers.
Q3	Jeans	Men's, women's, boys' and girls' jeans; excludes shorts.
Q4	Men's and boys' shirts	Excludes sweatshirts and nightshirts.
Q5	Women's shirts and blouses	Excludes sweatshirts and nightshirts.
Q6	Undressed sawn timber	Expressed in terms of green off saw volumes.
Q7	Hardwood woodchips	Expressed as greenweight; excludes chips which are not sold or are used in own works.
Q8	Alumina	Aluminium oxide.
Q9	Zinc	Primary origin only.
Q10	Silver	Refined.
Q11	Copper	Primary origin only.
Q12	Lead	Includes lead content of lead from primary sources.
Q13	Tin	Primary origin only.
Q14	Gold	From primary and secondary sources.



For more information . . .

The ABS publishes a wide range of statistics and other information on Australia's economic and social conditions. Details of what is available in various publications and other products can be found in the ABS Catalogue of Publications and Products available from all ABS Offices.

ABS Products and Services

Many standard products are available from ABS bookshops located in each State and Territory. In addition to these products, information tailored to the needs of clients can be obtained on a wide range of media by contacting your nearest ABS Office. The ABS also provides a Subscription Service for standard products and some tailored information services.

National Dial-a-Statistic Line

0055 86 400

Steadycom P/L: premium rate 25c/21.4 secs.

This number gives 24-hour access, 365 days a year, for a range of important economic statistics including the CPI.

Internet

<http://www.statistics.gov.au>

A wide range of ABS information is available via the Internet, with basic statistics available for each State, Territory and Australia. We also have Key National Indicators, ABS product release details and other information of general interest.

Sales and Inquiries

Keylink	STAT.INFO/ABS
X.400	(C:Australia,PUB:Telememo,O:ABS,FN:STAT,SN:INFO)
Internet	stat.info@abs.telememo.au

National Mail Order Service	(06) 252 5249
Subscription Service	1800 02 0608

	Information Inquiries	Bookshop Sales
SYDNEY	(02) 268 4611	(02) 68 4620
MELBOURNE	(03) 9615 7755	(03) 9615 7755
BRISBANE	(07) 3222 6351	(07) 3222 6350
PERTH	(09) 360 5140	(09) 360 5307
ADELAIDE	(08) 237 7100	(08) 237 7582
CANBERRA	(06) 252 6627	(06) 207 0326
HOBART	(002) 205 800	(002) 205 800
DARWIN	(08) 89432 111	(08) 89432 111



Client Services, ABS, PO Box 10, Belconnen ACT 2616

