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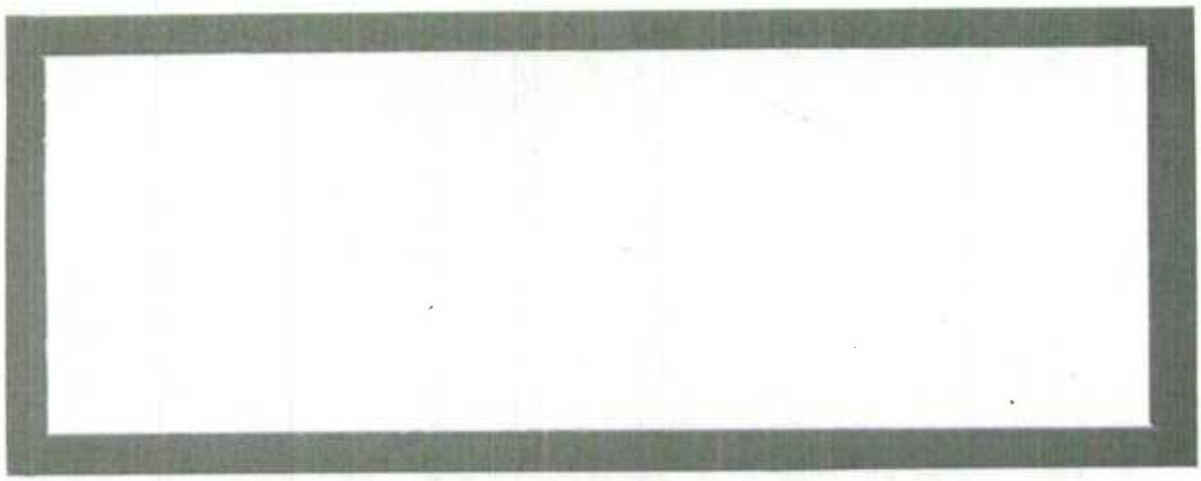

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WEIGHTS TO CALENDARIZE FISCAL YEAR DATA REFERRING TO ANY CONSECUTIVE 12 MONTHS OR 4 QUARTERS

by

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INTRODUCTION

Fiscal year data referring to April 1986 to March 1987 (say) are often calendarized in the following manner. The 1986 estimate is set equal to 1/4 (3/12) of the 85-86 fiscal value plus 3/4 (9/12) of the 86-87 value. The reasoning is: the 85-86 fiscal year contains 3 of the desired months, i.e. January to March 1986; and the 86-87 fiscal year contains 9 of the desired months, i.e. April 1986 to December 1986. If the fiscal years cover from May to April, the fractions applied are 4/12 and 8/12; and so forth.

This calendarization procedure works well, if the fiscal year values behave in a nearly linear manner. If they display turning points however, the procedure may work very poorly. This is illustrated in Figure 1 (b). The "1/2-1/2" 1986 estimate lies in between the 85-86 and the 86-87 fiscal year values. Figure 1 (a) displays the same two fiscal years plus 84-85 fiscal year. By looking at the three years together, it is obvious that any reasonable 1986 estimate has to lie above both the 85-86 and 86-87 fiscal year values. Indeed, the turning point in the underlying monthly (trend-cycle) values displayed must have occurred somewhere in 1986.

In such cases the calendar year estimates of flow series must be based on more than two years. This document tabulates fractions or weights, that can be applied to more than two fiscal years. The weights were calculated according to the methodology of Cholette and Baldwin (1988). When possible we advocate the 4-year weights of Table 3. The estimate for year 1985 (say) is thus based on four fiscal years: two on the "left", 83-84 and 84-85, and two on the right, 85-86 and 86-87. When this is impossible, the 3-year weights of Table 2 should be used. When this is also impossible, the 2-year weights of Table 1 should be used.

The weights of Tables 1 to 3 assume that the underlying monthly values level off at the ends, like in Figure 1 (a); those in Tables 4 to 6, that the monthly values behave linearly at the ends. We advocate the weights of

Tables 1 to 3 for the vast majority of socio-economic time series. These weights "protect" against turning-points and levelling-off. When subject matter experts know for sure that the variable never changes directions and never levels off, they could use the weights in Tables 4 to 6.

The weights should be applied in the following manner. Assume that the 4-year weights of Table 3 9) are used. When the 86-87 fiscal value becomes available, 1986 is calculated with the weights in the 4th row of the table; and the 1985 estimate is recalculated (i.e. revised) with the weights in the 3rd row. The weights in the 5th row are mainly for experimental purposes, as they implicitly involve forcasting April to December 1987. The resulting 1987 estimate would have little reliability. However if the socio-economic variable is very predictable or if a small number of months need to be forecasted (indicated in last row of each sub-table), the end weights may be used. Similarly the weights in the 1st row involve backcasting January to March 1983.

If revisions are out the question, the 3-year weights of Table 2 (and 5) can be applied.

When the fiscal years cover more or less than 12 months or when more precise estimates are desired or when the series are stock series (e.g. population and inventories, more sophisticated variants of ther method described herein must be used (Cholette and Baldwin, 1988). For that purpose, a SAS/IML computer program is available from the author (Rheaume and Cholette, 1988). That program may also be used to transform financial quarter data into conventional quarter values; and weekly bundles covering 4 or 5 weeks, into monthly values.

REFERENCES

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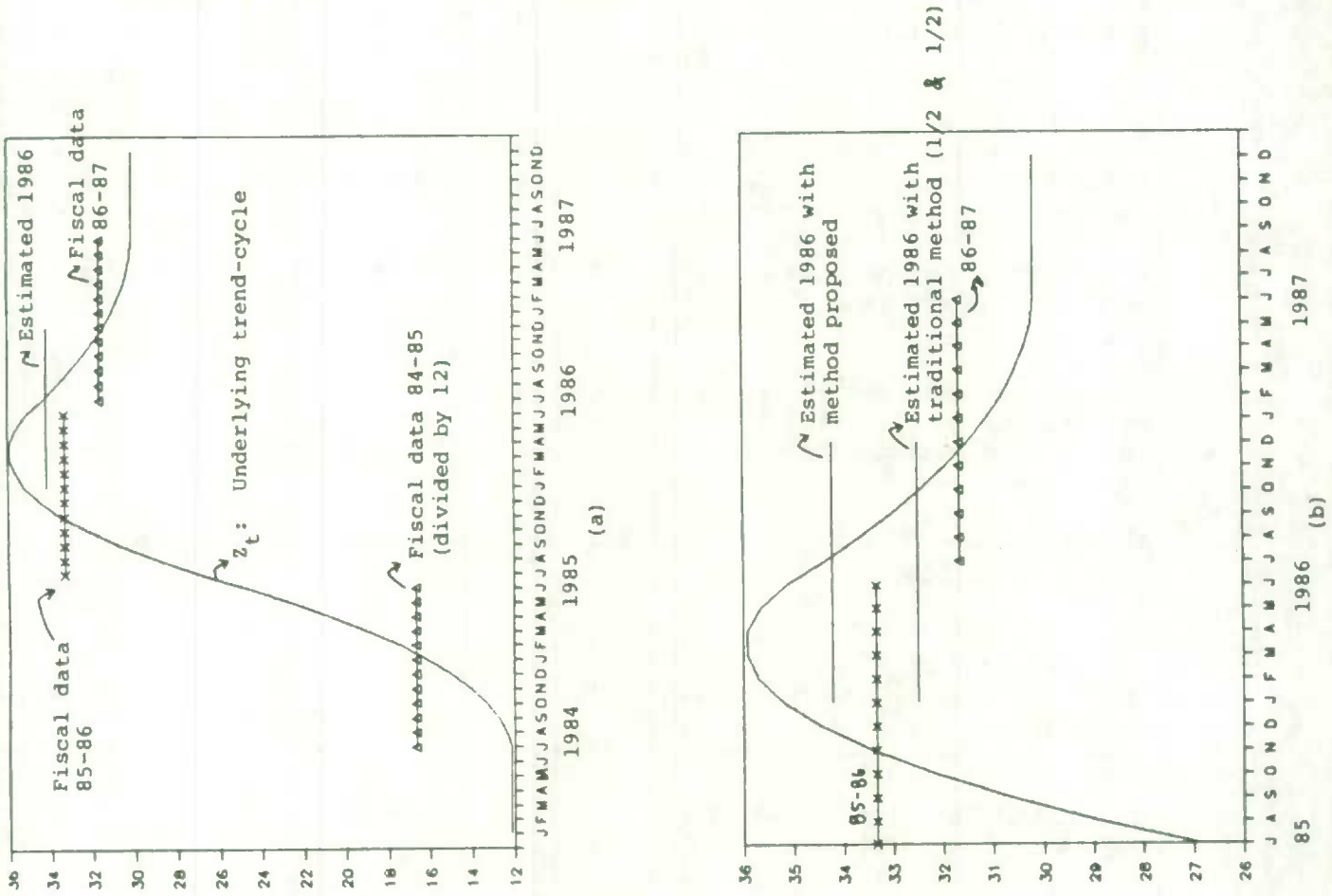

Figure 1: (a) Calendarizing fiscal year data starting in July and ending in June of the following year with the weights in Table 2 6); (b) comparison with the traditional estimate obtained by taking 1/2 of 85-86 and 1/2 of 86-87

TABLE 1: 2-year weights to transform fiscal year data into calendar year estimates, assuming FLATENING BEHAVIOUR of the implicit monthly forecasts at the ends (first differences)

1) Weights when the fiscal years start in December and end in November of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.2474	-0.2474	
to estimate year 1986:.....	0.9325	0.0675	
to estimate year 1987:.....	-0.0571	1.0571	(Dec. 87 forecasted)

2) Weights when the fiscal years start in November and end in October of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.2465	-0.2465	
to estimate year 1986:.....	0.8564	0.1436	
to estimate year 1987:.....	-0.1047	1.1047	(Nov. & Dec. 87 forecasted)

3) Weights when the fiscal years start in October and end in September of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.2439	-0.2439	
to estimate year 1986:.....	0.7734	0.2266	
to estimate year 1987:.....	-0.1436	1.1436	(Oct. to Dec. 87 forecasted)

4) Weights when the fiscal years start in September and end in August of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.2388	-0.2388	
to estimate year 1986:.....	0.6851	0.3149	
to estimate year 1987:.....	-0.1747	1.1747	(Sept. to Dec. 87 forecasted)

5) Weights when the fiscal years start in August and end in July of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.2301	-0.2301	
to estimate year 1986:.....	0.5934	0.4066	
to estimate year 1987:.....	-0.1990	1.1990	(Aug. to Dec. 87 forecasted)

6) Weights when the fiscal years start in July and end in June of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.2171	-0.2171	
to estimate year 1986:.....	0.5000	0.5000	
to estimate year 1987:.....	-0.2171	1.2171	(July to Dec. 87 forecasted)

7) Weights when the fiscal years start in June and end in May of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.1990	-0.1990	
to estimate year 1986:.....	0.4066	0.5934	
to estimate year 1987:.....	-0.2301	1.2301	(June to Dec. 87 forecasted)

8) Weights when the fiscal years start in May and end in April of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.1747	-0.1747	
to estimate year 1986:.....	0.3149	0.6851	
to estimate year 1987:.....	-0.2388	1.2388	(May to Dec. 87 forecasted)

9) Weights when the fiscal years start in April and end in March of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.1436	-0.1436	
to estimate year 1986:.....	0.2266	0.7734	
to estimate year 1987:.....	-0.2439	1.2439	(April to Dec. 87 forecasted)

10) Weights when the fiscal years start in March and end in February of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.1047	-0.1047	
to estimate year 1986:.....	0.1436	0.8564	
to estimate year 1987:.....	-0.2465	1.2465	(March to Dec. 87 forecasted)

11) Weights when the fiscal years start in February and end in January of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.0571	-0.0571	
to estimate year 1986:.....	0.0675	0.9325	
to estimate year 1987:.....	-0.2474	1.2474	(Feb. to Dec. 87 forecasted)

12) Weights when the fiscal years start in January and end in December:

	85	86	
to estimate year 1985:.....	1.0000	0.0000	
to estimate year 1986:.....	0.0000	1.0000	
to estimate year 1987:.....	-0.2474	1.2474	(Jan. to Dec. 87 forecasted)

TABLE 2: 3-year weights to transform fiscal year data into calendar year estimates, assuming FLATENING BEHAVIOUR of the implicit monthly forecasts at the ends (first differences)

1) Weights when the fiscal years start in December and end in November of the following year:

	applied to fiscal year			
	84-85	85-86	86-87	
to estimate year 1984:.....	1.2635	-0.3287	0.0652	
to estimate year 1985:.....	0.9281	0.0897	-0.0178	
to estimate year 1986:.....	-0.0430	0.9862	0.0568	
to estimate year 1987:.....	0.0150	-0.0759	1.0608	(Dec. forecasted)

2) Weights when the fiscal years start in November and end in October of the following year:

	applied to fiscal year			
	84-85	85-86	86-87	
to estimate year 1984:.....	1.2626	-0.3276	0.0650	
to estimate year 1985:.....	0.8473	0.1897	-0.0369	
to estimate year 1986:.....	-0.0737	0.9483	0.1254	
to estimate year 1987:.....	0.0276	-0.1391	1.1115	(Nov. & Dec. fore.)

3) Weights when the fiscal years start in October and end in September of the following year:

	applied to fiscal year			
	84-85	85-86	86-87	
to estimate year 1984:.....	1.2598	-0.3241	0.0643	
to estimate year 1985:.....	0.7595	0.2966	-0.0560	
to estimate year 1986:.....	-0.0932	0.8897	0.2036	
to estimate year 1987:.....	0.0378	-0.1908	1.1530	(Oct. to Dec. fore.)

4) Weights when the fiscal years start in September and end in August of the following year:

	applied to fiscal year 84-85	85-86	86-87	
to estimate year 1984:.....	1.2543	-0.3172	0.0629	
to estimate year 1985:.....	0.6669	0.4069	-0.0738	
to estimate year 1986:.....	-0.1032	0.8138	0.2894	
to estimate year 1987:.....	0.0460	-0.2322	1.1861	(Sep. to Dec. fore.)

5) Weights when the fiscal years start in August and end in July of the following year:

	applied to fiscal year 84-85	85-86	86-87	
to estimate year 1984:.....	1.2451	-0.3057	0.0606	
to estimate year 1985:.....	0.5715	0.5172	-0.0887	
to estimate year 1986:.....	-0.1048	0.7241	0.3806	
to estimate year 1987:.....	0.0524	-0.2644	1.2119	(Aug. to Dec. fore.)

6) Weights when the fiscal years start in July and end in June of the following year:

	applied to fiscal year 84-85	85-86	86-87	
to estimate year 1984:.....	1.2313	-0.2885	0.0572	
to estimate year 1985:.....	0.4754	0.6241	-0.0995	
to estimate year 1986:.....	-0.0995	0.6241	0.4754	
to estimate year 1987:.....	0.0572	-0.2885	1.2313	(July to Dec. fore.)

7) Weights when the fiscal years start in June and end in May of the following year:

	applied to fiscal year 84-85	85-86	86-87	
to estimate year 1984:.....	1.2119	-0.2644	0.0524	
to estimate year 1985:.....	0.3806	0.7241	-0.1048	
to estimate year 1986:.....	-0.0887	0.5172	0.5715	
to estimate year 1987:.....	0.0606	-0.3057	1.2451	(June to Dec. fore.)

8) Weights when the fiscal years start in May and end in April of the following year:

	applied to fiscal year 84-85	85-86	86-87	
to estimate year 1984:.....	1.1861	-0.2322	0.0460	
to estimate year 1985:.....	0.2894	0.8138	-0.1032	
to estimate year 1986:.....	-0.0738	0.4069	0.6669	
to estimate year 1987:.....	0.0629	-0.3172	1.2543	(May to Dec. fore.)

9) Weights when the fiscal years start in April and end in March of the following year:

	applied to fiscal year 84-85	85-86	86-87	
to estimate year 1984:.....	1.1530	-0.1908	0.0378	
to estimate year 1985:.....	0.2036	0.8897	-0.0932	
to estimate year 1986:.....	-0.0560	0.2966	0.7595	
to estimate year 1987:.....	0.0643	-0.3241	1.2598	(Apr. to Dec. fore.)

10) Weights when the fiscal years start in March and end in February of the following year:

	applied to fiscal year 84-85	85-86	86-87	
to estimate year 1984:.....	1.1115	-0.1391	0.0276	
to estimate year 1985:.....	0.1254	0.9483	-0.0737	
to estimate year 1986:.....	-0.0369	0.1897	0.8473	
to estimate year 1987:.....	0.0650	-0.3276	1.2626	(Mar. to Dec. fore.)

11) Weights when the fiscal years start in February and end in January of the following year:

	applied to fiscal year 84-85	85-86	86-87	
to estimate year 1984:.....	1.0608	-0.0759	0.0150	
to estimate year 1985:.....	0.0568	0.9862	-0.0430	
to estimate year 1986:.....	-0.0178	0.0897	0.9281	
to estimate year 1987:.....	0.0652	-0.3287	1.2635	(Feb. to Dec. fore.)

12) Weights when the fiscal years start in January and end in December

	applied to year 84	85	86	
to estimate year 1984:.....	1.0000	0.0000	0.0000	
to estimate year 1985:.....	0.0000	1.0000	0.0000	
to estimate year 1986:.....	0.0000	0.0000	1.0000	
to estimate year 1987:.....	0.0652	-0.3287	1.2635	(Jan. to Dec. fore.)

TABLE 3: 4-year weights to transform fiscal year data into calendar year estimates, assuming FLATENING BEHAVIOUR of the implicit monthly forecasts at the ends (first differences)

1) Weights when the fiscal years start in December and end in November of the following year:

	applied to fiscal year				
	83-84	84-85	85-86	86-87	
to estimate year 1983:.....	1.2647	-0.3344	0.0870	-0.0173	
to estimate year 1984:.....	0.9278	0.0912	-0.0237	0.0047	
to estimate year 1985:.....	-0.0421	0.9813	0.0758	-0.0150	
to estimate year 1986:.....	0.0114	-0.0574	0.9900	0.0561	
to estimate year 1987:.....	-0.0040	0.0201	-0.0772	1.0611	(Dec. fore.)

2) Weights when the fiscal years start in November and end in October of the following year:

	applied to fiscal year				
	83-84	84-85	85-86	86-87	
to estimate year 1983:.....	1.2637	-0.3332	0.0867	-0.0172	
to estimate year 1984:.....	0.8466	0.1929	-0.0493	0.0098	
to estimate year 1985:.....	-0.0716	0.9377	0.1661	-0.0323	
to estimate year 1986:.....	0.0195	-0.0983	0.9547	0.1241	
to estimate year 1987:.....	-0.0073	0.0368	-0.1415	1.1120	(Nov. & Dec. 1987 forecasted)

3) Weights when the fiscal years start in October and end in September of the following year:

	applied to fiscal year				
	83-84	84-85	85-86	86-87	
to estimate year 1983:.....	1.2610	-0.3297	0.0858	-0.0170	
to estimate year 1984:.....	0.7585	0.3014	-0.0748	0.0148	
to estimate year 1985:.....	-0.0900	0.8732	0.2670	-0.0502	
to estimate year 1986:.....	0.0247	-0.1244	0.8978	0.2020	
to estimate year 1987:.....	-0.0100	0.0505	-0.1941	1.1536	(Oct. to Dec. 1987 forecasted)

4) Weights when the fiscal years start in Setpember and end in August of the following year:

	applied to fiscal year				
	83-84	84-85	85-86	86-87	
to estimate year 1983:.....	1.2554	-0.3227	0.0840	-0.0167	
to estimate year 1984:.....	0.6656	0.4133	-0.0984	0.0195	
to estimate year 1985:.....	-0.0988	0.7917	0.3744	-0.0673	
to estimate year 1986:.....	0.0273	-0.1377	0.8228	0.2876	
to estimate year 1987:.....	-0.0122	0.0615	-0.2362	1.1869	(Sept. to Dec. 1987 forecasted)

5) Weights when the fiscal years start in August and end in July of the following year:

	applied to fiscal year 83-84	84-85	85-86	86-87	
to estimate year 1983:.....	1.2462	-0.3110	0.0809	-0.0161	
to estimate year 1984:.....	0.5700	0.5250	-0.1184	0.0235	
to estimate year 1985:.....	-0.0994	0.6971	0.4846	-0.0822	
to estimate year 1986:.....	0.0277	-0.1398	0.7333	0.3788	
to estimate year 1987:.....	-0.0139	0.0700	-0.2689	1.2128	(Aug. to Dec. 1987 forecaste

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6) Weights when the fiscal years start in July and end in June of the following year:

	applied to fiscal year 83-84	84-85	85-86	86-87	
to estimate year 1983:.....	1.2323	-0.2935	0.0764	-0.0151	
to estimate year 1984:.....	0.4737	0.6328	-0.1328	0.0263	
to estimate year 1985:.....	-0.0934	0.5934	0.5934	-0.0934	
to estimate year 1986:.....	0.0263	-0.1328	0.6328	0.4737	
to estimate year 1987:.....	-0.0151	0.0764	-0.2935	1.2323	(July to Dec. 1987 forecaste

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7) Weights when the fiscal years start in June and end in May of the following year:

	applied to fiscal year 83-84	84-85	85-86	86-87	
to estimate year 1983:.....	1.2128	-0.2689	0.0700	-0.0139	
to estimate year 1984:.....	0.3788	0.7333	-0.1398	0.0277	
to estimate year 1985:.....	-0.0822	0.4846	0.6971	-0.0994	
to estimate year 1986:.....	0.0235	-0.1184	0.5250	0.5700	
to estimate year 1987:.....	-0.0161	0.0809	-0.3110	1.2462	(June to Dec. 1987 forecaste

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8) Weights when the fiscal years start in May and end in April of the following year:

	applied to fiscal year 83-84	84-85	85-86	86-87	
to estimate year 1983:.....	1.1869	-0.2362	0.0615	-0.0122	
to estimate year 1984:.....	0.2876	0.8228	-0.1377	0.0273	
to estimate year 1985:.....	-0.0673	0.3744	0.7917	-0.0988	
to estimate year 1986:.....	0.0195	-0.0984	0.4133	0.6656	
to estimate year 1987:.....	-0.0167	0.0840	-0.3227	1.2554	(May to Dec. 1987 forecaste

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9) Weights when the fiscal years start in April and end in March of the following year:

	applied to fiscal year 83-84	84-85	85-86	86-87	
to estimate year 1983:.....	1.1536	-0.1941	0.0505	-0.0100	
to estimate year 1984:.....	0.2020	0.8978	-0.1244	0.0247	
to estimate year 1985:.....	-0.0502	0.2670	0.8732	-0.0900	
to estimate year 1986:.....	0.0148	-0.0748	0.3014	0.7585	
to estimate year 1987:.....	-0.0170	0.0858	-0.3297	1.2610	(April to Dec. 1987 forecasted)

10) Weights when the fiscal years start in March and end in February of the following year:

	applied to fiscal year 83-84	84-85	85-86	86-87	
to estimate year 1983:.....	1.1120	-0.1415	0.0368	-0.0073	
to estimate year 1984:.....	0.1241	0.9547	-0.0983	0.0195	
to estimate year 1985:.....	-0.0323	0.1661	0.9377	-0.0716	
to estimate year 1986:.....	0.0098	-0.0493	0.1929	0.8466	
to estimate year 1987:.....	-0.0172	0.0867	-0.3332	1.2637	(March to Dec. 1987 forecasted)

11) Weights when the fiscal years start in February and end in January of the following year:

	applied to fiscal year 83-84	84-85	85-86	86-87	
to estimate year 1983:.....	1.0611	-0.0772	0.0201	-0.0040	
to estimate year 1984:.....	0.0561	0.9900	-0.0574	0.0114	
to estimate year 1985:.....	-0.0150	0.0758	0.9813	-0.0421	
to estimate year 1986:.....	0.0047	-0.0237	0.0912	0.9278	
to estimate year 1987:.....	-0.0173	0.0870	-0.3344	1.2647	(Feb. to Dec. 1987 forecasted)

12) Weights when the fiscal years start in January and end in December

	applied to year 83	84	85	86	
to estimate year 1983:.....	1.0000	0.0000	0.0000	0.0000	
to estimate year 1984:.....	0.0000	1.0000	0.0000	0.0000	
to estimate year 1985:.....	0.0000	0.0000	1.0000	0.0000	
to estimate year 1986:.....	0.0000	0.0000	0.0000	1.0000	
to estimate year 1987:.....	-0.0173	0.0870	-0.3344	1.2647	(Jan to Dec. 1987 forecasted)

TABLE 4: 2-year weights to transform fiscal year data into calendar year estimates, assuming LINEAR BEHAVIOUR of the implicit monthly forecasts at the ends (second differences)

1) Weights when the fiscal years start in December and end in November of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.9167	-0.9167	
to estimate year 1986:.....	0.9167	0.0833	
to estimate year 1987:.....	-0.0833	1.0833	(Dec. 87 forecasted)

2) Weights when the fiscal years start in November and end in October of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.8334	-0.8333	
to estimate year 1986:.....	0.8333	0.1667	
to estimate year 1987:.....	-0.1667	1.1667	(Nov. & Dec. forecasted)

3) Weights when the fiscal years start in October and end in September of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.7500	-0.7500	
to estimate year 1986:.....	0.7500	0.2500	
to estimate year 1987:.....	-0.2500	1.2500	(Oct. to Dec. forecasted)

4) Weights when the fiscal years start in September and end in August of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.6667	-0.6667	
to estimate year 1986:.....	0.6667	0.3333	
to estimate year 1987:.....	-0.3333	1.3333	(Sept. to Dec. 87 forecasted)

5) Weights when the fiscal years start in August and end in July of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.5833	-0.5833	
to estimate year 1986:.....	0.5833	0.4167	
to estimate year 1987:.....	-0.4167	1.4167	(Aug. to Dec. 87 forecasted)

6) Weights when the fiscal years start in July and end in June of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.5000	-0.5000	
to estimate year 1986:.....	0.5000	0.5000	
to estimate year 1987:.....	-0.5000	1.5000	(July to Dec. 87 forecasted)

7) Weights when the fiscal years start in June and end in May of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.4167	-0.4167	
to estimate year 1986:.....	0.4167	0.5833	
to estimate year 1987:.....	-0.5833	1.5833	(June to Dec. 87 forecasted)

8) Weights when the fiscal years start in May and end in April of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.3333	-0.3333	
to estimate year 1986:.....	0.3333	0.6667	
to estimate year 1987:.....	-0.6667	1.6667	(May to Dec. 87 forecasted)

9) Weights when the fiscal years start in April and end in March of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.2500	-0.2500	
to estimate year 1986:.....	0.2500	0.7500	
to estimate year 1987:.....	-0.7500	1.7500	(April to Dec.87 forecasted)

10) Weights when the fiscal years start in March and end in February of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.1667	-0.1667	
to estimate year 1986:.....	0.1667	0.8333	
to estimate year 1987:.....	-0.8333	1.8333	(March to Dec. 87 forecasted)

11) Weights when the fiscal years start in February and end in January of the following year:

	85-86	86-87	
to estimate year 1985:.....	1.0833	-0.0833	
to estimate year 1986:.....	0.0833	0.9167	
to estimate year 1987:.....	-0.9167	1.9167	(Feb. to Dec. 87 forecasted)

12) Weights when the fiscal years start in January and end in December:

	85	86	
to estimate year 1985:.....	1.0000	0.0000	
to estimate year 1986:.....	0.0000	1.0000	
to estimate year 1987:.....	-1.0000	2.0000	(Jan. to Dec. 87 forecasted)

TABLE 5: 3-year weights to transform fiscal year data into calendar year estimates, assuming LINEAR BEHAVIOUR of the implicit monthly forecasts at the ends (second differences)

1) Weights when the fiscal years start in December and end in November of the following year:

	applied to fiscal year 84-85	85-86	86-87	
to estimate year 1984:.....	2.2745	-1.6322	0.3578	
to estimate year 1985:.....	0.8901	0.1365	-0.0266	
to estimate year 1986:.....	-0.0375	0.9916	0.0459	
to estimate year 1987:.....	0.0286	-0.1406	1.1120	(Dec. 87 forecasted)

2) Weights when the fiscal years start in November and end in October of the following year:

	applied to fiscal year 84-85	85-86	86-87	
to estimate year 1984:.....	2.1573	-1.4812	0.3239	
to estimate year 1985:.....	0.7829	0.2676	-0.0505	
to estimate year 1986:.....	-0.0666	0.9665	0.1001	
to estimate year 1987:.....	0.0589	-0.2844	1.2256	(Nov. & Dec. fore.)

3) Weights when the fiscal years start in October and end in September of the following year:

	applied to fiscal year 84-85	85-86	86-87	
to estimate year 1984:.....	2.0401	-1.3302	0.2901	
to estimate year 1985:.....	0.6789	0.3922	-0.0711	
to estimate year 1986:.....	-0.0876	0.9252	0.1624	
to estimate year 1987:.....	0.0903	-0.4307	1.3403	(Oct. to Dec. fore.)

4) Weights when the fiscal years start in September and end in August of the following year:

	applied to fiscal year 84-85	85-86	86-87	
to estimate year 1984:.....	1.9229	-1.1792	0.2563	
to estimate year 1985:.....	0.5789	0.5088	-0.0878	
to estimate year 1986:.....	-0.1009	0.8685	0.2324	
to estimate year 1987:.....	0.1227	-0.5786	1.4560	(Sep. to Dec. fore.)

5) Weights when the fiscal years start in August and end in July of the following year:

	applied to fiscal year 84-85	85-86	86-87	
to estimate year 1984:.....	1.8059	-1.0284	0.2225	
to estimate year 1985:.....	0.4836	0.6162	-0.0998	
to estimate year 1986:.....	-0.1070	0.7973	0.3097	
to estimate year 1987:.....	0.1556	-0.7279	1.5723	(Aug. to Dec. fore.)

6) Weights when the fiscal years start in July and end in June of the following year:

	applied to fiscal year 84-85	85-86	86-87	
to estimate year 1984:.....	1.6889	-0.8779	0.1889	
to estimate year 1985:.....	0.3936	0.7128	-0.1064	
to estimate year 1986:.....	-0.1064	0.7128	0.3936	
to estimate year 1987:.....	0.1889	-0.8779	1.6889	(July to Dec. fore.)

7) Weights when the fiscal years start in June and end in May of the following year:

	applied to fiscal year 84-85	85-86	86-87	
to estimate year 1984:.....	1.5723	-0.7278	0.1556	
to estimate year 1985:.....	0.3097	0.7973	-0.1070	
to estimate year 1986:.....	-0.0998	0.6162	0.4836	
to estimate year 1987:.....	0.2225	-1.0284	1.8059	(June to Dec. fore.)

8) Weights when the fiscal years start in May and end in April of the following year:

	applied to fiscal year 84-85	85-86	86-87	
to estimate year 1984:.....	1.4560	-0.5787	0.1227	
to estimate year 1985:.....	0.2324	0.8685	-0.1009	
to estimate year 1986:.....	-0.0878	0.5088	0.5789	
to estimate year 1987:.....	0.2563	-1.1792	1.9229	(May to Dec. fore.)

9) Weights when the fiscal years start in April and end in March of the following year:

	applied to fiscal year 84-85	85-86	86-87	
to estimate year 1984:.....	1.3403	-0.4307	0.0903	
to estimate year 1985:.....	0.1624	0.9252	-0.0876	
to estimate year 1986:.....	-0.0711	0.3922	0.6789	
to estimate year 1987:.....	0.2901	-1.3302	2.0401	(Apr. to Dec. fore.)

10) Weights when the fiscal years start in March and end in February of the following year:

	applied to fiscal year 84-85	85-86	86-87	
to estimate year 1984:.....	1.2256	-0.2844	0.0589	
to estimate year 1985:.....	0.1001	0.9665	-0.0666	
to estimate year 1986:.....	-0.0505	0.2676	0.7829	
to estimate year 1987:.....	0.3239	-1.4812	2.1573	(Mar. to Dec. fore.)

11) Weights when the fiscal years start in February and end in January of the following year:

	applied to fiscal year 84-85	85-86	86-87	
to estimate year 1984:.....	1.1120	-0.1406	0.0286	
to estimate year 1985:.....	0.0459	0.9916	-0.0375	
to estimate year 1986:.....	-0.0266	0.1365	0.8901	
to estimate year 1987:.....	0.3578	-1.6322	2.2744	(Feb. to Dec. fore.)

12) Weights when the fiscal years start in January and end in December:

	applied to year 84	85	86	
to estimate year 1984:.....	1.0000	0.0000	0.0000	
to estimate year 1985:.....	0.0000	1.0000	0.0000	
to estimate year 1986:.....	0.0000	0.0000	1.0000	
to estimate year 1987:.....	0.3916	-1.7833	2.3916	(Jan. to Dec. fore.)

TABLE 6: 4-year weights to transform fiscal year data into calendar year estimates, assuming LINEAR BEHAVIOUR of the implicit monthly forecasts at the ends (second differences)

1) Weights when the fiscal years start in December and end in November of the following year:

	applied to fiscal year				
	83-84	84-85	85-86	86-87	
to estimate year 1983:.....	2.3331	-1.8992	0.7158	-0.1497	
to estimate year 1984:.....	0.8859	0.1558	-0.0525	0.0109	
to estimate year 1985:.....	-0.0320	0.9665	0.0795	-0.0141	
to estimate year 1986:.....	0.0126	-0.0676	1.0141	0.0409	
to estimate year 1987:.....	-0.0118	0.0569	-0.1617	1.1166	(Dec. 1987 forecasted)

2) Weights when the fiscal years start in November and end in October of the following year:

	applied to fiscal year				
	83-84	84-85	85-86	86-87	
to estimate year 1983:.....	2.2103	-1.7228	0.6480	-0.1355	
to estimate year 1984:.....	0.7749	0.3041	-0.0994	0.0205	
to estimate year 1985:.....	-0.0553	0.9151	0.1690	-0.0288	
to estimate year 1986:.....	0.0233	-0.1222	1.0080	0.0910	
to estimate year 1987:.....	-0.0244	0.1172	-0.3279	1.2351	(Nov. & Dec. 1987 forecasted)

3) Weights when the fiscal years start in October and end in September of the following year:

	applied to fiscal year				
	83-84	84-85	85-86	86-87	
to estimate year 1983:.....	2.0876	-1.5464	0.5801	-0.1213	
to estimate year 1984:.....	0.6677	0.4432	-0.1395	0.0286	
to estimate year 1985:.....	-0.0706	0.8478	0.2663	-0.0434	
to estimate year 1986:.....	0.0316	-0.1632	0.9816	0.1500	
to estimate year 1987:.....	-0.0375	0.1800	-0.4975	1.3550	(Oct. to Dec. 1987 forecasted)

4) Weights when the fiscal years start in Setpember and end in August of the following year:

	applied to fiscal year 83-84	84-85	85-86	86-87	
to estimate year 1983:.....	1.9649	-1.3701	0.5123	-0.1071	
to estimate year 1984:.....	0.5652	0.5711	-0.1712	0.0349	
to estimate year 1985:.....	-0.0786	0.7669	0.3687	-0.0570	
to estimate year 1986:.....	0.0374	-0.1903	0.9352	0.2178	
to estimate year 1987:.....	-0.0510	0.2446	-0.6696	1.4760	(Sept. to Dec. 1987 forecaste

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5) Weights when the fiscal years start in August and end in July of the following year:

	applied to fiscal year 83-84	84-85	85-86	86-87	
to estimate year 1983:.....	1.8422	-1.1940	0.4447	-0.0929	
to estimate year 1984:.....	0.4683	0.6860	-0.1934	0.0392	
to estimate year 1985:.....	-0.0802	0.6755	0.4731	-0.0683	
to estimate year 1986:.....	0.0405	-0.2039	0.8696	0.2938	
to estimate year 1987:.....	-0.0648	0.3106	-0.8434	1.5976	(Aug. to Dec. 1987 forecaste

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6) Weights when the fiscal years start in July and end in June of the following year:

	applied to fiscal year 83-84	84-85	85-86	86-87	
to estimate year 1983:.....	1.7198	-1.0184	0.3774	-0.0788	
to estimate year 1984:.....	0.3775	0.7861	-0.2047	0.0411	
to estimate year 1985:.....	-0.0765	0.5765	0.5765	-0.0765	
to estimate year 1986:.....	0.0411	-0.2047	0.7861	0.3775	
to estimate year 1987:.....	-0.0788	0.3774	-1.0184	1.7198	(July to Dec. 1987 forecaste

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7) Weights when the fiscal years start in June and end in May of the following year:

	applied to fiscal year 83-84	84-85	85-86	86-87	
to estimate year 1983:.....	1.5976	-0.8434	0.3106	-0.0648	
to estimate year 1984:.....	0.2938	0.8696	-0.2039	0.0405	
to estimate year 1985:.....	-0.0683	0.4731	0.6755	-0.0802	
to estimate year 1986:.....	0.0392	-0.1934	0.6860	0.4683	
to estimate year 1987:.....	-0.0929	0.4447	-1.1940	1.8422	(June to Dec. 1987 forecaste

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8) Weights when the fiscal years start in May and end in April of the following year:

	applied to fiscal year 83-84	84-85	85-86	86-87	
to estimate year 1983:.....	1.4760	-0.6696	0.2446	-0.0510	
to estimate year 1984:.....	0.2178	0.9352	-0.1903	0.0374	
to estimate year 1985:.....	-0.0570	0.3687	0.7669	-0.0786	
to estimate year 1986:.....	0.0349	-0.1712	0.5711	0.5652	
to estimate year 1987:.....	-0.1071	0.5123	-1.3701	1.9649	(May to Dec. 1987 forecasted)

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9) Weights when the fiscal years start in April and end in March of the following year:

	applied to fiscal year 83-84	84-85	85-86	86-87	
to estimate year 1983:.....	1.3550	-0.4975	0.1800	-0.0375	
to estimate year 1984:.....	0.1500	0.9816	-0.1632	0.0316	
to estimate year 1985:.....	-0.0434	0.2663	0.8478	-0.0706	
to estimate year 1986:.....	0.0286	-0.1395	0.4432	0.6677	
to estimate year 1987:.....	-0.1213	0.5801	-1.5464	2.0876	(April to Dec. 1987 forecasted)

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10) Weights when the fiscal years start in March and end in February of the following year:

	applied to fiscal year 83-84	84-85	85-86	86-87	
to estimate year 1983:.....	1.2351	-0.3279	0.1172	-0.0244	
to estimate year 1984:.....	0.0910	1.0080	-0.1222	0.0233	
to estimate year 1985:.....	-0.0288	0.1690	0.9151	-0.0553	
to estimate year 1986:.....	0.0205	-0.0994	0.3041	0.7749	
to estimate year 1987:.....	-0.1355	0.6480	-1.7228	2.2103	(March to Dec. 1987 forecasted)

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11) Weights when the fiscal years start in February and end in January of the following year:

	applied to fiscal year 83-84	84-85	85-86	86-87	
to estimate year 1983:.....	1.1166	-0.1617	0.0569	-0.0118	
to estimate year 1984:.....	0.0409	1.0141	-0.0676	0.0126	
to estimate year 1985:.....	-0.0141	0.0795	0.9665	-0.0320	
to estimate year 1986:.....	0.0109	-0.0525	0.1558	0.8859	
to estimate year 1987:.....	-0.1497	0.7158	-1.8992	2.3331	(Feb. to Dec. 1987 forecasted)

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12) Weights when the fiscal years start in January and end in December

	applied to year 83	84	85	86	
to estimate year 1983:.....	1.0000	0.0000	0.0000	0.0000	
to estimate year 1984:.....	0.0000	1.0000	0.0000	0.0000	
to estimate year 1985:.....	0.0000	0.0000	1.0000	0.0000	
to estimate year 1986:.....	0.0000	0.0000	0.0000	1.0000	
to estimate year 1987:.....	-0.1639	0.7837	-2.0756	2.4558	(Jan to Dec. 1987 forecaste

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