Amortizing Initial Direct Costs of Capital Leases: Match or Mismatch?

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Abstract

In this paper, we discuss the treatment of initial direct costs associated with direct financing capital leases, as specified by SFAS No. 91 and SFAS No. 98. In particular, we show that this treatment results in a rather unusual (and, in our opinion, inappropriate) amortization pattern for initial direct costs over the lease term. We then discuss alternative amortization methods that conceptually may better satisfy the matching principle.

Introduction

Matching of expenses and revenues is a fundamental attribute of the accrual basis of accounting. Historically, the matching concept has been consistently applied by accounting standard-setting bodies as the basis for authoritative pronouncements addressing the timing of expense recognition. Capital expenditures "...are allocated by systematic and rational procedures to the periods during which the related assets are expected to provide benefits", SFAC No.5(1984, para.86(c)) and SFAC No.6(1985, para. 146). Even in those rare situations where matching may appear to be violated[1], the authoritative bodies have presented justifications such as uncertainty of future benefit or inability to relate costs directly to revenues.

The Financial Accounting Standards Board recently issued SFAS No. 91 (1986) and SFAS No. 98(1988). In SFAS No. 91 and No. 98, the FASB requires a procedure for the timing of expense recognition that, in our view, violates the matching concept. No justification is provided. In this paper we describe the nature of that violation and propose alternative expense recognition procedures that do match expenses to revenues.

SFAS No. 91

In response to concerns regarding inconsistency among financial institutions' accounting policies for loan origination fees and origination costs, the FASB issued SFAS No. 91 in 1986. SFAS No. 91 restricted the previously accepted methods of accounting for financing (loan) origination fees and origination costs to the deferral method. Although the primary objective of the Board was accounting by banks and savings and loan institutions, entities who engaged in other types of financing activities, including lessors engaged in direct financing capital leases, also were affected by the Statement.

The Board concluded that activities involved in originating or acquiring leases are not substantively different from the activities involved in lending arrangements and, therefore, the costs involved in those activities should be treated similarly. SFAS No. 91 amended several portions of SFAS No. 13(1976) and rescinded SFAS No. 17(1977) to conform the definition and accounting treatment of initial direct costs related to direct financing capital lease transactions to that of direct loan origination costs related to lending transactions.

Direct loan origination fees usually exceed direct loan origination costs, resulting in a net cash inflow. However, initial direct costs of capital leases usually result in a net cash outflow at the origination of the lease. This difference means that the matching (or mis-matching) effect is not so obvious for loan origination costs as it is for initial direct costs in direct financing capital leases.

SFAS No. 13 had required that initial direct costs be charged against income as incurred. Unearned income equal to the initial direct costs was recognized as earned income in the same period, reducing the effective interest rate on the lease. The balance of unearned income was amortized to income over the lease term, so as to produce a constant periodic rate of return on the investment in the lease. SFAS No. 17 subsequently amended the definition of initial direct costs, but did not change the accounting treatment.

SFAS No. 91 required several changes. The composition of initial direct costs was redefined; netting of initial direct costs and nonrefundable fees that are yield adjustments was required; the practice of offsetting the provision for bad debts against unearned income was eliminated. Most importantly for our purposes, SFAS No. 91 revised the accounting treatment of initial direct costs. No longer were they to be expensed in the period incurred, with an equal amount of unearned income recognized as earned. Instead, initial direct costs were to be included in the gross investment in the lease. Initial direct costs, as well as total unearned income, were then to be amortized over the life of the lease, using the effective interest method to report a constant rate of return on the net receivable.

There was a technical problem in the SFAS No. 91 treatment of initial direct costs. SFAS No. 91 required that initial direct costs associated with direct financing leases be recorded as a component of the gross investment in the lease. On the other hand, the unamended provisions of SFAS No. 13 require that unearned income at inception of the lease be computed by subtracting the cost of the leased equipment from the gross investment in the lease. Combination of these two standards causes:

1. The gross investment[2] account at inception to exceed future cash receipts by the amount of initial direct costs; 2. The unearned income account at inception to be overstated by the amount of initial direct costs; 3. The difference between the gross investment at inception and the cost of the leased asset (the unearned income) to exceed the amount of interest income which will be recognized over the lease term by twice the amount of the initial direct costs; 4. The gross investment and unearned income to be overstated throughout the lease term. At the termination of the lease, each account will have a remaining balance equal to the amount of initial direct costs.

These problems were noted in several studies (see for example, Ernst & Whinney(1987, p.17), Peat Marwick-(1987, p.39), and Means and Kazenski(1987, pp.63-67)). Means and Kazenski suggest two techniques for removing the excess unearned income and gross receivable: 1) offset a portion each period, or 2) wait until the end of the lease term and offset the full amounts (p.64,65). They do note that, while the earned revenue is recognized over the lease term in an effective interest pattern, "the amount of unearned interest revenue required to be disclosed in the footnotes would be misstated.", (P.65). Further, they state that "neither of these option is mechanically consistent with a literal interpretation of paragraph (5) of SFAS 91," (p. 66).

The Financial Accounting Standards Board itself recognized this technical problem; SFAS No. 98 attempted to rectify the situation. This solution, however, highlighted another problem that is conceptually more important.

SFAS No. 98

In SFAS No. 98, the FASB removed initial direct costs from the gross investment. Instead "initial direct costs are capitalized separately from the gross investment" (para. 68). Initial direct costs are, however, still included as a component of net investment. Then, both "unearned income and initial direct costs shall be amortized to income over the lease term, so as to produce a constant periodic rate of return on the net investment" (para. 22i).

The pattern of the amount of initial direct costs amortized each period is difficult to justify conceptually, since initial direct costs amortization expense is not related (matched) to the interest revenue recognized in any period. Specifically, the amount of initial direct costs amortized will increase during the early years of the lease term, and then decrease in the later periods. Interest income decreases throughout the lease term. This is illustrated following the next section.

Nature of Initial Direct Costs

Before illustrating the amortization pattern for initial direct costs required per SFAS No. 98, the nature of initial direct costs must be addressed and resolved. Are they incurred to generate future revenues, or are they an integral component of the cash flows from the lease agreement? We believe the FASB has already addressed and resolved that issue. SFAS No. 98 explicitly requires that initial direct costs be capitalized separately from the gross investment. As an expenditure accounted for separately, we conclude that initial direct costs are incurred to generate revenues.

Neither SFAS No. 91 nor SFAS No. 98 clearly describes how amortization of initial direct costs should be reported on the income statement. The apparent choices are to disclose separately or to net the amortization against earned revenue. Much of the available literature takes the position that initial direct costs should be amortized and reported separately, (see for example, Means and Kazenski (1987, p. 66), Coopers and Lybrand (1987, p. 32), and Peat Marwick (1987,p. 39,40)).

Peat Marwick argues that "the amortization of initial direct costs and unearned income should not be offset

for purposes of income statement presentation. Initial direct costs and unearned income should be amortized separately, using the interest method over the life of lease. Amortization of initial direct costs should be recorded as a component of expense, and amortization of unearned revenue should be recorded as interest income" (p.39). Peat Marwick attributes this separate accounting for the amortization of initial direct costs and unearned income to differences in timing of cash flows. "Cash disbursements for initial direct costs are incurred at lease inception, while cash receipts representing unearned income will be collected over the life of the lease." Peat Marwick (p. 40).

If initial direct costs are incurred to generate interest revenues, the amount of amortization expense in any period should be matched to the amount of interest revenue recognized in that period. As shown below, the amortization pattern that results from applying SFAS No. 98 does not match expense to revenue.

A Hypothetical Example

Lessor Company entered into a direct financing lease contract. Information about that lease agreement includes:
- The cost of the asset being leased was $425,678
- the lease term is 20 years
- the implicit interest rate (before initial direct costs) is 10 percent
- the residual value of the leased asset is zero
- based on the above data, the annual lease payment is determined to be $50,000
- initial direct costs at the inception of the lease totaled $100,000.

Determination of Interest Income

For the above illustration, first assume no initial direct costs. In that case, the amount of unearned income at the origination of the lease is $574,322 ($1,000,000 - $425,678). This amount would be amortized to income over the 20 year lease term by reducing the unearned income and recognizing interest income each year. Applying the effective interest method, the amount of interest income recognized each year would be the amount shown in Table 1, Column A (see APPENDIX 1 for a complete amortization schedule.)

Now assume initial direct costs of $100,000. Under SFAS No. 13, that $100,000 would be expensed immediately, and an equal amount of unearned income would be recognized at the origination of the lease. The unearned income to be recognized over the lease term would be reduced to $474,322 [($1,000,000 - $425,678) - $100,000], and the revised effective rate for calculating interest income would be 7.10%. The amount of interest income recognized each year, if SFAS No. 13 were still in effect, would be the amounts shown in Table 1, Column B (see APPENDIX 2 for a complete amortization schedule.)

Next assume the requirements of SFAS No. 91 were in effect. At the inception of the lease, the gross investment, (including initial direct costs) would have a balance of $1,100,000, and the initial balance in the unearned income account would be $574,322 ($1,100,000 - $425,678 - $100,000). Both amounts are larger (by $100,000) than under SFAS No. 13. However, that $100,000 will not be eliminated from either account throughout the lease term. Thus, the amounts of interest income recognized each year would still be the same as under SFAS No. 13 with initial direct costs. That is, the amounts in Table 1, Column B. SFAS No. 91 did not change the amount of interest income recognized each year; it only caused the balances of gross investment and unearned income accounts to be overstated throughout and at the end of the lease term.

Finally, assume the requirements of SFAS No. 98 are in effect. In this case, at the inception of the lease, the gross investment is $1,000,000, unearned income is $574,322, and a new account for initial direct costs is created with a balance of $100,000.

The intent of SFAS No. 98 is to recognize a net contribution to earnings in each year equal to the amount of net interest income as if SFAS No. 13 were still in effect. As noted above, many feel that separate recognition of interest income and initial direct costs amortization expense is appropriate. The unearned income ($574,322) should be amortized to interest income as shown in Table 1, Column A. To achieve the desired net contribution to earnings, the initial direct costs must then be amortized in an amount equal to the difference between Columns A and B in Table 1. Thus, initial direct costs amortization expense for each year would be the amounts shown in Table 1, Column C.

As can be seen (Table 1, column C), application of the requirements of SFAS No. 98 will result in a rather unusual pattern for initial direct costs amortization expense. This pattern, increasing amounts in early years and decreasing amounts in later years, while the interest income steadily decreases, seems quite inconsistent with the concept of matching expenses to revenues.

Alternative Amortization Patterns

The technique that seems conceptually more appropri-

TABLE 1

Initial Direct Costs Amortization (per SFAS No. 98)

Year	(A) Interest Revenue (No IDC)	(B) Interest Revenue (With IDC)	(C) IDC Amort per SFAS 98 (A - B)
1	42,568	37,314	5,254
2	41,825	36,414	5,411
3	41,007	35,449	5,558
4	40,108	34,416	5,691
5	39,119	33,310	5,808
6	38,030	32,126	5,905
7	36,833	30,857	5,977
8	35,517	29,498	6,019
9	34,068	28,043	6,026
10	32,475	26,484	5,991
11	30,723	24,815	5,908
12	28,795	23,027	5,768
13	26,675	21,113	5,562
14	24,342	19,062	5,280
15	21,776	16,866	4,910
16	18,954	14,514	4,440
17	15,849	11,995	3,854
18	12,434	9,297	3,137
19	8,678	6,408	2,270
20	4,545	3,314	1,232
	574,322	474,322	100,000

TABLE 2

Comparison of Amortization Patterns

Year	(A) Interest Revenue (No IDC)	(B) Percent Total Revenue	(C) IDC Amort per Int. Revenue	(D) IDC Amort per SFAS 98	(E) Difference (C - D)
1	42,568	7.412%	7,412	5,254	2,158
2	41,825	7.282%	7,282	5,411	1,872
3	41,007	7.140%	7,140	5,558	1,582
4	40,108	6.983%	6,983	5,691	1,292
5	39,119	6.811%	6,811	5,808	1,003
6	38,030	6.622%	6,622	5,905	717
7	36,833	6.413%	6,413	5,977	437
8	35,517	6.184%	6,184	6,019	165
9	34,068	5.932%	5,932	6,026	(94)
10	32,475	5.655%	5,655	5,991	(337)
11	30,723	5.349%	5,349	5,908	(559)
12	28,795	5.014%	5,014	5,768	(754)
13	26,675	4.645%	4,645	5,562	(918)
14	24,342	4.238%	4,238	5,280	(1,042)
15	21,776	3.792%	3,792	4,910	(1,119)
16	18,954	3.300%	3,300	4,440	(1,140)
17	15,849	2.760%	2,760	3,854	(1,095)
18	12,434	2.165%	2,165	3,137	(972)
19	8,678	1.511%	1,511	2,270	(759)
20	4,545	0.791%	791	1,232	(440)
	574,322	100.000%	100,000	100,000	0

ate for matching expenses to revenues generated is one that recognizes amortization expense in a period in direct proportion to the interest revenue recognized that period. Table 2 illustrates an amortization schedule thus constructed. Column A reproduces the amortization schedule for unearned income without any consideration of initial direct costs. Column B shows the percent of total unearned income to be recognized in each period. Column C illustrates the amount determined by applying each percentage to the total amount of initial direct costs at inception of the lease.

The magnitude of the differences between matching initial direct costs to interest income, per the procedures proposed here, and applying the SFAS No. 98 procedures is shown in Column E. This column is derived by subtracting the amounts in Column D (the pattern of initial direct costs amortization expense from Table 1) from the amount in Column C. As can be seen, there are significant differences between the expensed amounts in many periods.

As an alternative, a straight-line amortization pattern might also be considered. While we cannot conceptually justify straight-line as appropriately matching expenses to revenues, we recognize that in some situations the difference may not be material. In any case, however, we find it difficult to justify the procedures specified by SFAS No. 91 and No. 98.

Conclusion

Initial direct costs are incurred by a lessor at the inception of a direct financing capital lease, to generate future interest revenues to be realized as a result of that lease transaction. While SFAS No. 91 and No. 98 have required some changes in accounting for initial direct costs, we conclude that those changes result in recognition of an expense in a pattern not appropriately matched to revenues generated. We propose an alternative procedure which seems to much better match expenses to revenues.

In deliberating prior to issuing SFAS No. 91 and No. 98, the FASB may not have considered the implications of, in effect, netting interest revenue and initial direct costs amortization. We encouraged the FASB to reconsider their position with respect to initial direct costs, and to remain cognizant of the matching concept in future deliberations.

Notes

1. For example, many critics feel that SFAS No. 2, Accounting for Research and Development Costs, violates matching since the future benefits of current research and development expenditures are ignored.
2. The minimum lease payments . . . plus the unguaranteed residual value . . . plus initial direct costs, (SFAS No. 91, para. 25-a).

References

1. *Statement of Financial Accounting Concepts No. 5: Recognition and Measurement in Financial Statements of Business Enterprises*, AICPA, (December, 1984), Para. 86(c)).
2. *Statement of Financial Accounting Concepts No. 6: Elements of Financial Statements*, AICPA, (December, 1985), Para. 146.
3. *Statement of Financial Accounting Standards No. 91, Accounting for Nonrefundable Fees and Costs Associated with Originating or Acquiring Loans and Initial Direct Costs of Leases*, AICPA, December, 1986.
4. *Statement of Financial Accounting Standards No. 98, Accounting for Leases: . . . Initial Direct Costs of Direct Financing Leases*, AICPA, (May, 1988).
5. *Statement of Financial Accounting Standards No. 13: Accounting for Leases*, AICPA, (November, 1976).
6. *Statement of Financial Accounting Standards No. 17: Accounting for Leases--Initial Direct Costs*, AICPA, (November, 1977).
7. Ernst & Whinney, *Financial Reporting Developments, Accounting for Nonrefundable Fees and Costs Associated with Originating or Acquiring Loans and Initial Direct Costs of lease, Understanding and Implementing FASB Statement No.91*, June, 1987, P.17.
8. Peat Marwick, *Accounting for Loan Fees and Costs, An Analysis of FASB Statement 91*, August, 1987, P.39.
9. Means, Kathryn M. and Paul M. Kazenski, "SFAS 91: New Dilemmas," *Accounting Horizons*, December 1987, PP.63-67.

APPENDIX 1

AMORTIZATION SCHEDULE
(per SFAS No. 13)
No Initial Direct Costs

Annual Payment:	50,000
Number of Years:	20
Gross Receivable:	1,000,000
Asset Cost:	425,678
Unearned Income:	574,322
Interest Rate:	10.00%

Year	Interest Revenue	Cash Received	Gross Receivable	Unearned Income	Net Receivable
0			1,000,000	574,322	425,678
1	42,568	50,000	950,000	531,754	418,246
2	41,825	50,000	900,000	489,930	410,070
3	41,007	50,000	850,000	448,922	401,078
4	40,108	50,000	800,000	408,815	391,185
5	39,119	50,000	750,000	369,696	380,304
6	38,030	50,000	700,000	331,666	368,334
7	36,833	50,000	650,000	294,832	355,168
8	35,517	50,000	600,000	259,316	340,684
9	34,068	50,000	550,000	225,247	324,753
10	32,475	50,000	500,000	192,772	307,228
11	30,723	50,000	450,000	162,049	287,951
12	28,795	50,000	400,000	133,254	266,746
13	26,675	50,000	350,000	106,579	243,421
14	24,342	50,000	300,000	82,237	217,763
15	21,776	50,000	250,000	60,461	189,539
16	18,954	50,000	200,000	41,507	158,493
17	15,849	50,000	150,000	25,657	124,343
18	12,434	50,000	100,000	13,223	86,777
19	8,678	50,000	50,000	4,545	45,455
20	4,545	50,000	0	0	0
	574,321	1,000,000	10,500,000	4,756,794	5,743,206

APPENDIX 2

AMORTIZATION SCHEDULE
(per SFAS No. 13)
With Initial Direct Costs

Annual Payment:	50,000
Number of Years:	20
Gross Receivable:	1,000,000
Asset Cost:	425,678
Initial Direct Costs:	100,000
Unearned Income:	574,322
Interest Rate:	7.10%

Year	Interest Revenue	Cash Received	Gross Receivable	Unearned Income	Net Receivable
0			1,000,000	474,322	525,678
1	37,314	50,000	950,000	437,008	512,992
2	36,414	50,000	900,000	400,594	499,406
3	35,449	50,000	850,000	365,145	484,855
4	34,416	50,000	800,000	330,728	469,272
5	33,310	50,000	750,000	297,418	452,582
6	32,126	50,000	700,000	265,293	434,707
7	30,857	50,000	650,000	234,436	415,564
8	29,498	50,000	600,000	204,938	395,062
9	28,043	50,000	550,000	176,895	373,105
10	26,484	50,000	500,000	150,411	349,589
11	24,815	50,000	450,000	125,596	324,404
12	23,027	50,000	400,000	102,569	297,431
13	21,113	50,000	350,000	81,456	268,544
14	19,062	50,000	300,000	62,394	237,606
15	16,866	50,000	250,000	45,529	204,471
16	14,514	50,000	200,000	31,015	168,985
17	11,995	50,000	150,000	19,019	130,981
18	9,297	50,000	100,000	9,722	90,278
19	6,408	50,000	50,000	3314	46,686
20	3,314	50,000	0	0	0
	474,322	1,000,000	10,500,000	3,817,802	6,682,198