



Federal Accounting Standards Advisory Board

February 18, 2005

TO: Members of FASAB
FROM: Richard Fontenrose, Assistant Director
THROUGH: Wendy Comes, Executive Director
SUBJECT: Social Insurance Liability Project

NOTE: FASAB staff prepares memos and other materials to facilitate discussion of issues at Board meetings. This material is presented for discussion purposes only; it is not intended to reflect authoritative views of the FASAB or its staff. Official positions of the FASAB are determined only after extensive due process and deliberations.

This paper continues the discussion of the Social Security liability from the December meeting. This paper provides:

- Social Security characteristics re-shaped to reflect the members' comments.
- A discussion of the three obligating events that were on page 27 of the December 2004 staff memorandum.
- A discussion of possible approaches for calculating the liability and cost amounts.

The staff presents two questions for the Board's consideration:

1. Does the Board agree with the substance of the Social Security characteristics presented below?
2. What is the Board's preference regarding the obligating events presented below?

I. Social Security Characteristics

The Social Insurance Liability Project seeks to reflect and coordinate with the Elements – Liabilities Project. Over the past months the Board has discussed potential liability characteristics based on Financial Accounting Standards Board concepts. Ms. Wardlow's

1 March 2005 memorandum, paragraph L7, presents two such characteristics adjusted for the
2 federal context. First, the federal entity has a present obligation. A “present obligation”
3 would require a past event. Second, “under existing conditions, the federal entity is required
4 to settle the obligation at a specified or determinable date, when a specific event occurs, or
5 on demand.”
6

7 The staff assumes that certain characteristics of the Social Security (and other) program(s)
8 support the conclusion that a present obligation exists, in conjunction with a past obligating
9 event, prior to the point when benefit payments are due and payable.

10
11 The characteristics below would presumably create a present obligation in conjunction with
12 an obligating event because, under existing conditions, the Government is required to settle
13 the obligation at a specified or determinable date, when a specific event occurs, or on
14 demand.

15
16 a. Eligibility.

17
18 Current law provides the conditions that, once met, qualify the participants to
19 receive a specific benefit for a specific period of time. Such benefits begin within
20 a discernable range of dates and end upon occurrence of a specified event. The
21 specificity of the law with respect to qualification for benefits, timing and amount
22 of benefit payments, and provision of recourse if benefits are unlawfully withheld
23 may influence the determination of what past transaction (obligating event)
24 creates a present obligation to make a future sacrifice consistent with the liability
25 definition.
26

27 b. Performance.

28
29 The participants are performing under the terms of the program. With respect to
30 Social Security, participants work in covered employment and the wages earned
31 therein determine the amount they (and their employers) pay in dedicated taxes
32 and their future benefits. Participants can and do reasonably expect and rely on
33 the future benefits. They and their employers arrange their long-term finances
34 based thereon. Moreover, performing under the terms of the program and
35 paying dedicated taxes can be viewed as exchanging current resources for future
36 benefits. The participatory nature of the program contributes to the belief that
37 future benefits arise or accrue as a result of events occurring before or during the
38 period. This connection between future benefit payments and past events –
39 perhaps coupled with meeting conditions for eligibility – suggests that a present
40 obligation to make a future sacrifice arises from these past events.
41

42 c. Other

43
44 Other characteristics of Social Security that may be relevant include the
45 **specificity** of benefits and benefit formulas; the “**permanence of funding**,” and
46 direct communication benefit information. While the Board’s consensus in prior
47 discussions was that the existence of funding is not required for a liability to exist,
48 some believe the permanence of funding adds weight to the notion that an
49 obligation exists, especially when the participants are providing that funding.
50 Current law not only provides all the means to determine the entitlement, amount
51 and timing of benefits but also provides a perpetual source of funding.

The staff presumes that the concepts of exchange and/or nonexchange transaction would be relevant but not essential to meet a liability definition. The occurrence of an exchange transaction traditionally has triggered the recording an accounting event, but a liability could exist without either an exchange or a nonexchange transaction occurring, e.g., a tort or natural disaster.

Does the Board agree with the substance of the Social Security characteristics present above?

II. Obligating Events

Three obligating events are presented below: (1) full eligibility, (2) threshold eligibility, and (3) beginning work in covered employment. Under the current liability standards, liabilities are accrued for Social Security when “due and payable.” The obligating event occurs when absolutely all conditions necessary for payment have been met. Potential obligating events other than “due and payable” would recognize that the remaining unmet conditions are: (1) beyond the control of the Government under current law, and (2) the likelihood that the conditions will remain unmet is remote to varying degrees within the population.

Conditions beyond the control of the Government include the passage of time, the aging of fully insured individuals, and continued work in covered employment to become fully insured. Each of these conditions is equally beyond the control of the entity. However, some members may find relevance in the ability of the Government to change the eligibility conditions. For example, some members may believe it is more likely that benefit formulas for participants with less than 40 quarters of work in covered employment (QC) would be changed than for fully eligible participants. Staff does not believe this is relevant to the assessment of obligating events. If it is to be considered, staff would consider it in the context of recognition criteria. For example, the Board may wish to consider whether reliable measures that are understandable to users are feasible for alternate obligating events.

Each of the conditions beyond the control of entity could be considered to have a remote chance of remaining unmet if viewed for the population of participants instead of for individuals. Some may argue that it is remote that there will not be future participants and that the existence of the program is therefore the obligating event. Staff believes that the mere existence of a program would not satisfy the requirement for a past event. There would be no current participants relying on benefits. The entity would not be required to settle “at a specified or determinable date, when a specific event occurs, or on demand.” Thus, at a minimum, actual participation in meeting the conditions of the program is required to be considered an event for accounting purposes. For example, if conditions to qualify for a one-time payment were simply the birth of a child then birth could be an “event” relevant to obligations for that program.

1. **Full eligibility.** For Old-Age and Survivors Insurance (OASI), fully eligible is 62 years old with 40 QC. For Disability Insurance (DI), full eligibility is a qualifying disability with 40 QC or equivalent based on age at time of disability.

1 Traditionally, age 62 has been the earliest age for receiving old-age retirement and
2 survivor benefits under OASI, dependents excepted.

3
4 Using the preliminary liability characteristics, at this point:

5
6 a. Present obligation:

- 7
8 i. Current law established a program and mandates that the Government will meet
9 its obligations to the fully eligible participant. The law is specific with respect to
10 qualification for benefits, timing and amount of benefit payments. The
11 participants have met the conditions so specified and are eligible to receive an
12 immediate, specific benefit for a specific period of time. Benefits end upon
13 occurrence of a specified event. The participant has recourse if benefits are
14 unlawfully withheld.
- 15 ii. The participants have performed under the terms of the program. They worked
16 in covered employment for the requisite time period and the wages earned
17 therein determined both the amount they (and their employers) paid in
18 dedicated taxes and their future benefits. Participants reasonably have
19 expected and relied on the future benefits and continue to do so. They and their
20 employers reasonably would have arranged their long-term finances based
21 thereon. Moreover, the Government encouraged them to view and they
22 reasonably could view their past performance under the terms of the program
23 and payment of dedicated taxes as an exchange of current resources for future
24 benefits. The participatory nature of the program contributed to the belief that
25 future benefits arise or accrue as a result of past events.
- 26 iii. The obligating event has already occurred: all eligibility conditions have been
27 met for OASI and DI. DI participants are fully eligible with 40 QCs or
28 equivalent. Upon suffering a qualifying disability, certain DI participants will be
29 entitled to payments based on their earnings through covered employment.

- 30
31 b. Under existing conditions, the Government is required to settle the obligation at a
32 specified or determinable date, when a specific event occurs, or on demand.

33
34 **Discussion**

35
36 Changes in benefits are improbable for this group. In addition, some may view this as a
37 preferable obligating event because the reliability of estimates of payments is higher
38 than with earlier obligating events. Staff believes that both the likelihood of changes in
39 law and the reliability of estimates are not relevant to determining the point at which a
40 liability definition would be met, but may be relevant to other decisions such as an
41 assessment of relevance, reliability or understandability.

42
43 In the context of deciding whether it is remote that other conditions will not be met, this
44 obligating event leaves only the passage of time and remaining alive (either the fully
45 insured individual or an eligible dependent). Thus, the notion of remoteness is not
46 extended far. If members consider the potential for changes in law relevant, this
47 obligating event leaves very little room for changes in law to influence the liability.

1 From the December 2004 FASAB staff Social Insurance Liability Project memorandum:

2
3 The point at which conditions are satisfied for Social Security and other programs
4 can be termed “threshold eligibility” and “full eligibility.” The Public Sector
5 Committee (PSC) Invitation to Comment (ITC) *Accounting for Social Policies of*
6 *Governments (Social Policies)* term “threshold eligibility” would be applicable for
7 instances such as 40 QC, while eligibility for an immediate annuity at 62 or for
8 medical treatment at 65 would be labeled “full eligibility.” In both cases there
9 would be no more conditions to meet, unless one considers staying alive a
10 program condition.

11
12 The PSC ITC *Social Policies* identifies three Options or alternative views
13 regarding past event(s) that give rise to a present obligation in the absence of
14 legal enforceability. Option 1, the full eligibility alternative (“satisfy all eligibility
15 criteria”), provided that, for “ongoing benefits subject to regular satisfaction of
16 eligibility criteria, the maximum amount of the present obligation is the benefit
17 that the individual is entitled to from the current point in time until the next point in
18 time at which eligibility criteria must be satisfied.” However, where validation of
19 eligibility criteria is required only once, the present obligation would be for all
20 future benefits to be provided to that individual as a result of that validation.

21
22 There is some debate about the extent of the Option 1 accrual. ITC paragraph
23 4.35 clearly states that, “where no further validation of entitlement is required, the
24 government has a liability for both current and future amounts to be paid to the
25 individual.” But, regarding government pensions (Chapter 8), paragraph 8.13
26 also states that the present obligation for pensions under Option 1 is limited to
27 the benefits receivable from the point that eligibility criteria are satisfied until the
28 next payment date (or the date at which eligibility must be satisfied again, if this
29 point is different). According to this view, there is no long-term liability because
30 individuals can cease to meet eligibility criteria at any point in time due to death
31 or failing to meet income or asset tests. Thus, the ITC Option 1 considered
32 staying alive a condition. ~~Also, Staff emphasizes the last phrase—i.e., failing to~~
33 ~~meet income and asset tests—because it seems to indicate that the PSC viewed~~
34 ~~means testing as significant in the consideration of liabilities.~~

35
36 The PSC ITC Option 2, “Satisfy threshold criteria,” and Option 3, “Key
37 participatory events,” presented earlier past transactions than Option 1. ~~[The full~~
38 ~~text of the ITC Options is provided on page 21.]~~

39
40 Ms. Wardlow’s December memorandum notes that FASB Statement 116,
41 *Accounting for Contributions Received and Contributions Made*, (Issue Date
42 6/93) defines a conditional promise to give as one that depends “on the
43 occurrence of a specified future and uncertain event to bind the promisor” (par.
44 22). Statement 116 states that such promises should be recognized when the
45 conditions are substantially met (i.e., the promise becomes unconditional). Ms.
46 Wardlow notes that Statement 116 also indicates “a conditional promise to give is
47 considered unconditional if the possibility that the condition will not be met is
48 remote” (par. 22). As an example, the FASB states that the possibility that a
49 donee would fail to provide a required annual report to receive subsequent
50 annual payments on a multiyear promise to give would be a remote condition. It
51 would not preclude a liability encompassing amounts beyond the current year.

52
53 Ms. Wardlow states that the FASAB may wish to consider whether there
54 is a parallel concept here for multiyear programs that have certain
55 eligibility requirements beyond those initially required. For some of those

requirements, the possibility that they would not be met might be remote, so that an expense and a liability would be incurred upon satisfaction of the initial eligibility requirements. In contrast, satisfaction of other requirements to renew eligibility might be more problematic, suggesting that the expense and liability be limited to the first year of eligibility.

2. **Threshold eligibility.** OASI and DI = 40 QC or equivalent of work in covered employment

a. Present obligation

- i. Current law established a program and mandates that the Government will meet its obligations to the eligible participant. The law is specific with respect to qualification for benefits, timing and amount of benefit payments. The participants have met the conditions so specified for threshold eligibility and they or their eligible dependents will receive a specific benefit for a specific period of time barring death. Benefits end upon occurrence of a specified event. The participant will have recourse if benefits are unlawfully withheld.
- ii. The participants are performing under the terms of the program. They are working in covered employment and the wages they are earning determine both the amount they (and their employers) pay in dedicated taxes and their future benefits. Participants reasonably expect and rely on the future benefits. They and their employers reasonably would arrange their long-term finances based thereon. Moreover, the Government encourages them to view and they reasonably could view their performance under the terms of the program and payment of dedicated taxes as an exchange of current resources for future benefits. The participatory nature of the program contributes to the belief that future benefits arise or accrue as a result of events occurring before or during the period.
- iii. The obligating event has already occurred: Threshold eligibility conditions have been met. OASI participants attaining 40 QC need not perform any further work in covered employment to become eligible; only the passage of time remains. Further action by the participant, i.e., additional work in covered employment, does not create the liability; it only increases the amount of the liability. As stated under "full eligibility" above, DI participants are fully eligible with 40 QCs or equivalent based on age at time of disability.

2. Under existing conditions, the Government is required to settle the obligation at a specified or determinable date, when a specific event occurs, or on demand.

Discussion

Changes in benefits are probable for this group. The reliability of estimated payments would be lower than with "full eligibility." However, again, staff believes that both the likelihood of changes in law and the reliability of estimates are not relevant to determining the point at which a liability definition would be met, but may be relevant to other decisions such as an assessment of relevance, reliability or understandability.

1 In the context of deciding whether it is remote that other conditions will not be met,
2 this obligating event, too, leaves only the passage of time and remaining alive
3 (either the fully OASI insured individual or an eligible dependent). However, the
4 notion of remoteness is extended farther here than for “full eligibility.” If members
5 consider the potential for changes in law relevant, this obligating event leaves room
6 for changes in law to influence the liability.
7

8 From the December 2004 FASAB staff Social Insurance Liability Project
9 memorandum:

10
11 The 40 quarters in covered employment (QC) requirement that render participants
12 ~~permanently~~ eligible (or “**permanently insured**”) for Old-age and Survivors
13 Insurance (OASI) and Medicare benefits appears to be similar to vesting provision
14 of pension and stock-based compensation plans. With respect to stock-based
15 compensation, the FASB ~~exposure draft~~ *Share-based Payments* (March 31, 2004)
16 called for public entities to measure the cost of employee services received in
17 exchange for equity instruments based on the grant-date fair value of those
18 instruments, and to recognize the cost over the requisite service period (often the
19 vesting period). Generally, no compensation cost would be recognized for equity
20 instruments that do not vest. recently released SFAS 123R, *Accounting for Stock-*
21 *Based Compensation*, requires the cost of share-based payment transactions with
22 employees and non-employees to be recognized in the financial statements. For a
23 vesting award having only service conditions, compensation cost may be
24 recognized ... on a straight-line basis over the requisite service period. For awards
25 having a performance condition, compensation cost should be accrued only if it is
26 probable that the performance condition will be achieved. Previously recognized
27 compensation cost should not be reversed if employee share options expire
28 unexercised.
29

30 The Social Security and Medicare programs require participants to work 40 QC to
31 qualify for benefits. (Eligibility with fewer than 40 quarters is possible in cases of
32 disability and for survivors. See Glossary, Appendix A, for more on **disability**
33 **benefits and survivor benefits**.) After meeting the 40 QC condition, no additional
34 conditions are required to be eligible to receive a payment that is due at a specified
35 time (attainment of the designated age). This is also true for Medicare: the
36 participant is eligible for Hospital Insurance (HI) and [to purchase] Supplemental
37 Medical Insurance (SMI) after 40 QC. At 62 years of age (or 65 for Medicare) a
38 participant with 40 QC is eligible to receive benefits.
39

40 By contrast, eligibility for Food Stamps and other “social assistance” programs is not
41 ~~permanent~~ and unconditional. The benefit for social assistance programs is based
42 on conditions existing in the benefit year; specifically, the participant’s means and,
43 where applicable, medical condition.
44

45 [Footnotes omitted]

46 Some members noted in December that “threshold eligibility” appealed to them but, from
47 an accounting perspective, they leaned toward the “beginning of work in covered
48 employment” obligating event. They were concerned that the “full eligibility” and
49 “threshold eligibility” obligating events seemed to ignore an accruing obligation for all the
50 people who had not reached those points. They suggested that perhaps the obligating
51 event is “beginning of work in covered employment,” but a reliable estimate would not be
52 possible for that event until “threshold eligibility or even “full eligibility.”
53

Several members noted that such an approach for private pension accounting is labeled “cliff vesting” and that it was no longer in use. One member noted that the objective of the accrual process is to record costs over the period they are being incurred, and waiting until the edge of the cliff means having nothing recorded during the time you are getting to the cliff.

It was noted that projecting future salaries of a 15-year old over the first 40 quarters of their working life would be very difficult, whereas reliable estimates would be much easier with respect to an older person who has attained 40 quarters and even more so for a 62-year old that has attained 40 quarters. However, it was also noted that Social Security actuaries are currently projecting such amounts and they will be subject to audit in two years.

3. Beginning work in covered employment for OASI and DI.

The obligating event of “work in covered employment” also meets the two preliminary liability characteristics:

a. Present obligation

- I. Current law established a program and mandates that the Government will meet its obligations to the fully eligible participant. The law is specific with respect to qualification for benefits, timing and amount of benefit payments. The participants will receive a specific benefit for a specific period of time barring death. Benefits end upon occurrence of a specified event. The participant will have recourse if benefits are unlawfully withheld.
- II. The participants are performing under the terms of the program. They are working in covered employment and the wages they are earning therein determine both the amount they (and their employers) pay in dedicated taxes and their future benefits. Participants reasonably expect and rely on the future benefits. They and their employers reasonably would arrange their long-term finances based thereon. Moreover, the Government encourages them to view and they reasonably could view their performance under the terms of the program and payment of dedicated taxes as an exchange of current resources for future benefits. The participatory nature of the program contributes to the belief that future benefits arise or accrue as a result of events occurring before or during the period.
- III. The obligating event has already occurred: participants are performing under the terms of the program. Failure to meet the eligibility conditions is remote and uncertainty can be addressed in recognition and measurement phases.

- b. Under existing conditions, the Government is required to settle the obligation at a specified or determinable date, when a specific event occurs, or on demand.

Discussion

From the December 2004 FASAB staff Social Insurance Liability Project memorandum:

As participants perform under the terms of social insurance programs the Government’s ability to avoid the payment would seem to diminish. In her December 2004 memorandum Ms. Wardlow cites FASB Statement 116, par. 77,

1 in support of the notion that uncertainties about meeting a condition diminish over
2 time.

3
4 Makers of conditional promises generally can avoid a future sacrifice of assets if
5 they provide promisees with timely notification of the cancellation of their
6 conditional promise. However, as time passes that ability diminishes. Case law
7 and public policy suggest that once a promisee has begun efforts in reliance on a
8 conditional promise, both parties should be held to their promises. Promisors
9 generally are not allowed to escape their promises until and unless a reasonable
10 period of time has elapsed for the promisee to meet the condition, and promisees
11 generally are held to their part of the agreement, which includes meeting the
12 condition. However, until the specified future and uncertain event that is the
13 subject of the condition occurs or fails to occur, a promisee does not have an
14 unconditional right to retain the assets transferred or to demand payments.
15 [Emphasis added]
16

17 The actuarial assumption for entry into the OASDI workforce for SOSI purposes is
18 15 years old. In the PSC ITC *Social Policies*, a minority of the ITC Steering
19 Committee members supported "Option 3" (key participatory events: workforce
20 entry). They stated that there was sufficient expectation and reliance at that point
21 to establish a present obligation.
22

23 During the debate on SFFAS 17 some argued that for SI programs, as
24 distinguished from general assistance programs, the payment of payroll taxes in
25 conjunction with the program's other features and long history establish an
26 "earned right to benefits." Some commentators noted the argument that such
27 taxes create an "insured status" which an individual needs to be eligible for
28 benefits.
29

30 Discretion

31
32 Some would argue that the Government has accepted responsibility for future OASDI
33 benefits when participants begin working in covered employment and paying payroll
34 taxes, despite the fact that it is not known with certainty which individuals will eventually
35 satisfy all eligibility criteria. A statistically determinable number of participants will meet
36 the eligibility criteria in future periods. Some argue that uncertainty is a measurement
37 issue involving actuarial assumptions, statistical methods, etc.
38

39 Others would disagree, arguing that Congressional discretion ought to be considered
40 rather than current law alone. For example, some note old age benefits have been
41 reduced without compensation by the introduction of a means test when benefits were
42 previously available regardless of an individual's income or assets.
43

44 If discretion is viewed from the Congressional perspective instead of the current law
45 perspective, the Government's discretion to eliminate or reduce OASDI benefits (and
46 therefore avoid an obligation) may vary between age groups. For example, the
47 Government may be able to reduce future old age benefits for people who have not yet
48 accumulated 40 QCs but it may have considerable difficulty reducing future old age
49 benefits thereafter; and even more trouble for people closer to retirement who are more
50 likely to have made decisions based on the expectation of benefits.
51

52 From a current law perspective, the entity's discretion to make the required payments
53 would not vary with time.

Expectations and Reliance

Arguably a valid expectation for OASDI benefits is created when an individual works in covered employment and pays taxes. For many OASDI participants, this expectation is critical since old age benefits represent a significant part of an individual's post-retirement income and the reliance on it would be reasonable.

When the participant begins paying payroll tax and working in covered employment, he or she will begin making savings and investment decisions based on the current policies and past practices of the Government and will rely on receiving old age benefits in the future. They will likely arrange personal, family and business affairs accordingly. They are likely to make these arrangements well in advance of reaching the age of eligibility.

On the other hand, some might argue that the reliance and expectations of someone who has worked for only one day or one hour is substantially different than one who has worked 40 QC. However, the different degree of reliance would be captured in the measure of the obligation.

Also, some would argue that a significant number of people, especially young people, have serious doubts about their future benefits and do not appear to rely on receiving them.

What is the Board's preference regarding the above obligating events?

III. Liability and Cost Amounts

Several members asked for a discussion of possible measures of the liability and cost for each of the three obligating events. At least one member mentioned that seeing the effects of alternatives, at least in terms of pluses and minuses if not with actual numbers, would be helpful during the discussion of measurement.

Liability Measures

Several approaches to measuring "unfunded obligation" and/or liability amounts have been and are being discussed. The Office of the Actuary, Social Security Administration (SSA), discusses three measures of Social Security obligations in the paper at Appendix B. These are the "maximum transition cost," the "closed group transition cost," and "open group unfunded obligation."¹ These measures can serve as a starting point for the discussion of measures.

Maximum Transition Cost

The "maximum transition cost" (MTC) is similar to a pension-type liability measure. The

¹ See Appendix B – Actuarial Note: Unfunded Obligation and Transition Cost for OASDI.

MTC population is the current participants – workers and those on the rolls – only and it measures benefits “earned” or credited as of the reporting date. It is computed as the difference between (1) the present value of all future accrued benefit obligations² payable and (2) the value of the assets on the valuation date plus the present value of revenue from taxation of future accrued benefit obligations payable. From an accounting perspective, e.g., SFFAS 5 or SFAS 87, future revenue would not be included in a pension measure, but the staff assumes that the present value of “revenue from taxation of future accrued benefit obligations payable” would not be a large amount relative to the other amounts involved.

For 2004, SSA estimates the MTC to be \$13.5 trillion. The MTC is net of assets in the trust fund and adding back the assets yields a net obligation of \$15 trillion, as shown in Table 1 immediately below. (Also see Appendix B.)

Table 1 – “Maximum Transition Cost”

(trillions)	“Max. Trans. Cost” – PBO-type Amount
Revenue	\$ 0 ³
Cost	<u>15.0</u>
Net	15.0
Less: Assets	<u>1.5⁴</u>
Maximum Transition Cost	<u>\$13.5⁵</u>

Although the staff is using it as a surrogate for a pension-type liability, the MTC is not calculated quite the same as either the accumulated benefit obligation (ABO) or projected benefit obligation (PBO) that a corporation would report pursuant to SFAS 87, *Employers’ Accounting for Pensions*.⁶ However, conceptually, it is the closest thing to the PBO that is officially computed and reported for Social Security.

Social Security is not a pension plan and therefore it may not be appropriate to apply pension accounting methodologies to it. FASB was working in a particular legal and economic environment with respect to SFAS 87. The Employee Retirement Security Act (ERISA) gave FASB the charge to develop pension accounting standards, and established the legal framework. Part of the context for deliberations on SFAS 35, *Accounting for Pensions Plans*, was the legal definition of vested liabilities, and the legal ability of an employer to terminate a plan. That continued to be the case, and may be part of the reason the FASB continued to use the ABO to measure the minimum liability, while using the PBO as the starting point for measuring the expense. Part of the economic context for deliberations on SFAS 87 was the long-term rise in interest rates, which, with other factors, led to increasing numbers of plan terminations to capture

² SSA defines the “accrued benefit obligation” as the “future benefit obligations based on past earnings as of the valuation date. Thus, these accrued benefit obligations are relevant only to current participants as of the valuation date. The accrued benefit obligations are based on the primary insurance amount (PIA), the early retirement or delayed retirement factors, and other rules of payment.” See Appendix B.

³ Although the SSA defines the “maximum transition cost” to include income tax on SS benefits, the assumption used here is that such revenue would not be material.

⁴ From FY 2004 FRUSG.

⁵ From SSA. See Appendix B of this memo.

⁶ See Appendix C, “Selections from SFAS 87 Glossary,” for more on the definitions of the ABO and PBO and other FASB terms.

"excess" assets. This made it difficult for accountants to ignore the economic reality created by current market values of assets and liabilities.

Some might argue for note disclosure of what a pension-type measure would be, e.g., the ABO and PBO. If that were required it would have to include, to avoid being misleading, an explanation that Social Security is different from a pension program: it is not deferred compensation to employees.

The GASB took a different approach to pension accounting than SFAS 87. Some have characterized it as similar to the old APB Opinion 8. GASB was working in a different context. And FASAB took yet another approach in SFFAS 5, based on its perceptions of what was appropriate in the federal environment. Thus, an argument for certain method of accounting may need to be understood in a specific context.

Closed Group Transition Cost

Another measure provided by SSA is the "closed group transition cost," which is similar to the "maximum transition cost" except that the future cost and future taxes for current participants are included in the calculations. SSA uses a 100-year projection period for the closed group transition cost in order to capture the lifetime of all the current participants included in the valuation. SSA's calculated the "closed group transition cost" as \$11.2 trillion. Using this amount and the FY 2004 Statement of Social Insurance, the staff illustrates the relationship between the MTC and the closed group transition cost in Table 2 immediately below. (Also see Appendix B.)

Table 2 – "Closed Group Transition Cost"

Existing Participants			
(trillions)	"Max. Trans. Cost" (1)	Future Taxes and Benefits (2)	"Closed Group Trans. Cost" (3) [(1)+(2)]
Revenue	\$ 0	\$14.8 ⁷	\$14.8
Cost	<u>15.0</u>	<u>12.3</u> ⁸	<u>27.3</u> ⁹
Net	(15.0)	2.3	(12.7)
Less: Assets	<u>1.5</u> ¹⁰		<u>1.5</u>
Maximum Transition Cost	<u>\$(13.5)</u> ¹¹	<u>\$2.3</u>	<u>\$11.2</u>

The "closed group transition cost" is similar to the "premium deficiency" liability recognized in the insurance industry for future policy benefits relating to long-duration contracts. That liability represents the present value of future benefits to be paid to or on behalf of policyholders and related expenses less the present value of future net

⁷ Derived from FY 2004 SOSI. Participants 62+ (\$4 trillion) plus participants 15-61 (\$14.4 trillion).

⁸ Derived from FY 2004 SOSI. Participants 62+ (\$4.9 trillion) plus participants 15-61 (\$22.4 trillion) less the staff's estimate of "gross" "maximum transition cost" (\$15.0 trillion).

⁹ Derived from FY 2004 SOSI. Participants 62+ (\$4.9 trillion) plus participants 15-61 (\$22.4 trillion).

¹⁰ From FY 2004 FRUSG.

¹¹ From SSA. See Appendix B of this memo.

1 premiums and assets for the current “book of business” or policies in force. Changes in
2 the liability for future policy benefits that result from its periodic estimation for financial
3 reporting purposes are recognized in income in the period in which the changes occur.
4 [See SFAS 60, ¶21]

5
6 SFFAS 5 similarly requires life insurance programs to recognize a liability for future
7 policy benefits for current policyholders that relates to insured events, such as death or
8 disability, in addition to the liability for unpaid claims incurred. [SFFAS5, ¶104]

9
10 The “closed group transition cost” might also be said to reflect the “risk assumed”
11 information required by SFFAS 5 as required supplementary information. Risk assumed
12 is generally measured by the present value of unpaid expected losses net of associated
13 premiums, based on the risk inherent in the insurance or guarantee coverage in force.
14 [SFFAS5, ¶105 as amended by SFFAS 25, ¶4.]

15 16 *Open Group Unfunded Obligation*

17
18 Another measure provided by SSA is the “open group unfunded obligation.” It includes
19 all income and benefits to be paid for a specified time period, e.g., 75-years, for all who
20 will participant in the program during that period. It is computed as the difference
21 between:

- 22
23 (a) The present value of the future cost of the program between the valuation date
24 and the end of the specified time period, and
25 (b) The sum of the assets in the trust fund as of the valuation date and the present
26 value of the future scheduled tax income of the program between the valuation date
27 and the end of the specified time period.

28
29 Thus, all current and future participants over the specified time period are included in the
30 computations.

31
32 Although the three obligating events currently under discussion do not involve the “open
33 group,” i.e., they do not include future participants, staff presents it below, in Table 3 for
34 comparison. The open group unfunded obligation focuses on the adequacy of funding
35 rather than the amount or net amount accrued or credited benefits as of the reporting
36 date. Thus, it would be inappropriate for measuring the liability solely to current
37 participants. It has, however, often been used as an indicator of the sustainability or
38 actuarial status of the program.

Table 3– “Open Group Unfunded Obligation”

(trillions)	Existing Participants			Future Participants	Existing and Future Participants
	“Max. Trans. Cost” (1)	Future Taxes and Benefits (2)	“Closed Group Trans. Cost” (3) [(1)+(2)]	Future New Entrants (75-year horizon) (4)	“Open Group Unfunded Obligation” (75-year horizon) (5) [(3)+(4)]
Revenue	\$ 0	\$14.7 ¹²	\$14.7	\$12.9 ¹³	\$27.6
Less: Cost	15.0 ¹⁴	12.4 ¹⁵	27.4	5.5 ¹⁶	32.9
subtotal	(15.0)	2.3	(12.7)	7.4	(5.3)
Less: Assets	1.5 ¹⁷		1.5		1.5
Net or “unfunded” amount	\$(13.5) ¹⁸	\$2.3	\$(11.2)	\$7.4	\$(3.8) ¹⁹

Measurement in Relation to the Obligating Events

Table 4 immediately below presents alternative liability measures for current participants disaggregated by obligating event. The obligating events are in columns (1), (2) and (3).

Table 4, line 1, presents the present value of future benefits over a 75-year horizon and is derived from the FY 2004 Statement of Social Insurance (SOSI) in the Financial Report of the United States Government (FRUSG). This measure includes benefits to be “earned” or credited in the future as well as those “earned” or credited on or as of the reporting date; thus, it would be larger than a “maximum transition cost” or pension-type amount. Also, since it does not include future revenue, it is larger than a “closed group transition cost” or premium deficiency number.

A note regarding Table 4 column 2, which presents a present value for “threshold eligibility” – i.e., 40 quarters in covered employment (QC). To derive this amount the

¹² From FY 2004 SOSI in FRUSG, total for participants 62+ and 15-61 years of age.

¹³ From FY 2004 SOSI in FRUSG, total for future participants 2004-2078.

¹⁴ This amount was “backed into” using \$13.5 trillion from SSA’s “maximum transition cost” and the asset amount from the FY 2004 FRUSG.

¹⁵ This amount was “backed into” by subtracting the \$15.0 amount in column (1) from \$27.4 trillion, the total cost for participants 62+ and 15-61 years of age from the FY 2004 SOSI in FRUSG.

¹⁶ From FY 2004 SOSI in FRUSG, total for future participants 2004-2078.

¹⁷ From FY 2004 FRUSG.

¹⁸ From SSA. See Appendix B of this memo.

¹⁹ The open group unfunded obligation for the infinite horizon is \$10.4 trillion. See Appendix B.

1 staff employed a very rough assumption that 40 QC/10 years equals 25% of the 15-61
2 age group provided in SOSI, assuming a working career of 40 years, and subtracted that
3 amount from the “beginning of work” obligating event (column (3)), which represents the
4 entire population 15-61. Column 2 is not added to derive the total in column (4) because
5 column (1) plus (3) would equal 100 percent of the current participants.
6

7 Table 4, line 2, presents a measure similar to the “closed group transition cost” and/or a
8 “premium deficiency” type amount. It presents the same information as line 1 except
9 that the future taxes to be paid by each group are subtracted. The data for line 2 is
10 essentially from the FY 2004 SOSI. The net amount in column (5) is slightly different
11 from the amount SSA calculates for the closed group transition cost (\$11.2 trillion – see
12 Appendix B), but an analysis of the difference is beyond the scope of this preliminary
13 discussion.
14

15 Table 4, line 3, presents a measure based on the SSA’s “maximum transition cost” and
16 represents a pension-type amount. To derive the data for this line the staff started with
17 the MTC, which is was calculated by SSA (\$13.5 trillion), and the asset amount (\$1.5
18 trillion), from the notes for the SOSI. The staff added these to derive the \$15 trillion net
19 cost amount and subtracted the cost for the 62+ year olds (from the FY 2004 SOSI) to
20 derive the cost for the 15-61 year olds. A factor of 75% was applied to this amount to
21 derive the amount for the threshold group.
22

23 Table 4, line 4, is the current “due and payable” liability reported by SSA and FRUSG.

Table 4— Possible Liability Measures for the Three Obligor Event Alternatives

(billions of dollars)	Full eligibility – 62 years old (1)	Threshold eligibility (2)	Beginning work in covered employment (3)	Total for Current Participants (4) [(1)+(3)]	Assets (5)	Net Amount (6) [(4)-(5)]
1. Present value (PV) of benefits (1) “earned” or credited to date and (2) that will be “earned” or credited over the next 75 years by current participants. [From FY04 SOSI, FRUSG]	4,933	16,814 ²⁰	22,418	27,351	1,531	25,820
2. Net present value of benefits (1) “earned” or credited to date and (2) that will be “earned” or credited over the next 75 years by current participants over (3) the present value of future taxes to be paid by current participants. This is a “closed group transition cost” type measure. [Calculated from FY04 SOSI, FRUSG]	4,933 (411) 4,522	16,814 (10,791) 6,023	22,418 (14,388) 8,030	27,351 (14,799) 12,552	1,531	11,021
3. The present value of benefits (1) “earned” or credited to work in covered employment performed by current participants as of the reporting date. Excludes benefits credited to work to be performed in the future. This number is based on the “maximum transition cost.” [From FY04 SOSI, FRUSG and Appendix B of this memo]	4,933	7,550	10,067	15,000	1,500	13,500
4. “Due and payable” amounts. From FY04 SOSI, FRUSG]				51.6	1,500	-----

²⁰ From 2004 SOSI: To derive the present value for “Threshold eligibility” – 40 Qtrs.’ staff employed a very rough assumption of that 40 OC/10 years equals 25% of the 15-61 age group, assuming a working career of 40 years, and subtracted that amount from the “beginning of work” measure provided in SOSI. The full amount of the 15-61 present value is in the “Beginning work in covered employment” column since that covers all participants working in covered employment.

Expense Measures

A key consideration regarding Social Security and social insurance generally has been and continues to be: when should expense be recognized? Presumably the Board will be considering expense definitions in due course, but the FASAB Consolidated Glossary contains the following definition of expense:

Outflows or other using up of assets or incurrences of liabilities (or a combination of both) during a period from providing goods, rendering services, or carrying out other activities related to an entity's programs and missions, the benefits from which do not extend beyond the present operating period.

The SFFAS 17, *Accounting for Social Insurance*, approach was as follows:

The expense recognized for the reporting period should be the benefits paid during the reporting period plus any increase (or less any decrease) in the liability from the end of the prior period to the end of the current period. The liability should be social insurance benefits due and payable to or on behalf of beneficiaries at the end of the reporting period, including claims incurred but not reported (IBNR).

If the Social Security expense represents the incurrence of a liability rather than the cash payment, then there are several approaches to measure that increase. Table 5 immediately below presents the net increase (decrease) in the obligation/liability measure, for 2004, for each of the four lines in Table 4 above.

Table 5, line 1 represents the increase in the present value of benefits (1) "earned" or credited to date and (2) that will be "earned" or credited over the next 75 years by current participants. Assets are subtracted.

Table 5, line 2 represents the increase in the net present value of benefits (1) "earned or credited to date and (2) that will be "earned" or credited over the next 75 years by current participants over (3) the present value of future taxes to be paid by current participants. Assets are subtracted.

Table 5, line 3 represents the increase in the net present value of benefits (1) "earned" or credited to work in covered employment performed by current participants as of the reporting date. Assets are then subtracted. This amount is a rough guesstimate for the purpose of illustration. Here and elsewhere the staff intends to work with actuaries and others to develop and/or review the illustrations for an eventual exposure draft. To derive this expense amount the staff assumed that the working life of an average worker is 40 years and that the average worker has worked half his or her working life and therefore a illustrative number for the limited purposes of this initial discussion would be 50 percent of the measure for the 15-61 year old group in line #1 of this table.

Table 5, line 4 is the cash outflow reporting for the Social Security programs in 2004.

1 **Table 5- Possible Cost Measures for the Three Obligating Event Alternatives**

(in billions of dollars)	Full eligibility – 62 yrs. Old (1)	“Threshold eligibility” – 40 Qtrs. (2) [.75 x (3)]	Beginning work in covered employment (3)	Total for Current Participants (4) [(1)+(3)]	Future workers (4)	SOSI Total (5) [(4)+(5)]
1. Increase in the present value of benefits (1) “earned” or credited to date and (2) that will be “earned” or credited over the next 75 years by current participants. ²¹ This measure relates to Table 4 line 1. from SOSI and therefore a measure of the next 75 years)	271	977	1403	1,674	180	1853
2. Net increase in the net present value of benefits (1) “earned or credited to date and (2) that will be “earned” or credited over the next 75 years over (3) the present value of future payroll taxes. This measure relates to the “closed group transition cost” in Table 4 line 2. ²² From SOSI) [a “closed group transition cost” type measure.]	219	443	591	810	(507)	303
3. Increase in the net present value of benefits “earned” or credited through the reporting date. This measure relates to the “maximum transition cost” type measure in Table 4 line 3. (This is half of line #1.) [A “maximum transition cost” type measure.]	271	367	702	973	XXXXX	XXXX
4. Cash outflow (from SSA’s FY 2004 SNC). This measure relates to Table 4, line 4.	XXXX	XXXX	XXXX	XXXX	XXXX	488

2

²¹ From 2004 SOSI: the difference between 2004 and 2003 present values. To derive the present value for “Threshold eligibility” – 40 Qtrs.’ staff employed a very rough assumption of 25% of the 15-61 age group, assuming a working career of 40 years. The total present value for the 15-61 population is in the “Beginning work in covered employment” column.

²² From 2004 SOSI: the difference between 2004 and 2003 present values. To derive the present value for “Threshold eligibility” – 40 Qtrs.’ staff employed a very rough assumption of 25% of the 15-61 age group, assuming a working career of 40 years. The total present value for the 15-61 population is in the “Beginning work in covered employment” column.

Staff notes with respect to expense and cost that all accounting methodologies for "defined benefit" pension plans depend on using either (1) some method of allocating the cost of projected benefits to years of covered employment (e.g., entry age normal); or, (2) attributing the projected future benefit to years of covered service, then valuing it (e.g., unit credit). All methods of allocation or attribution can be said to be – in a sense – "arbitrary" even though they are also reasonable or "rational and systematic." In this regard, they are different from the closed group and open group methods.

Pensions "cost" would have several components. The Board may or may not want to require a breakout cost into components regardless of which methodology is eventually selected. For example, pension cost components are as follows:

- Service or normal cost;
- Interest on the obligation;
- The effect of changes in actuarial assumptions; and
- Amortization of prior service cost.

If the cost is to be net of return on plan assets as called for in SFAS 87, *Employers' Accounting for Pensions*, -- but not under the FASAB's SFFAS 5 -- then the calculation includes that effect as well.

Regarding SFFAS 5, the FRUSG contains the following table for federal pensions in the note disclosure:

Table 6 – Change in Actuarial Accrued Pension Liability and Component of Expense

Change in Actuarial Accrued Pension Liability and Components of Related Expenses			
(In billions of dollars)	Civilian ¹	Military	Total ¹
Actuarial accrued pension liability as of September 30, 2003	1,190.4	739.0	1,929.4
Adjusted accrued pension liability	<u>1,190.4</u>	<u>739.0</u>	<u>1,929.4</u>
Pension Expense:			
Normal costs	25.3	13.0	38.3
Plan amendment and assumption change liability	-	81.0	81.0
Interest on liability	73.1	45.3	118.4
Actuarial (gains)/losses	<u>(3.7)</u>	<u>(4.0)</u>	<u>(7.7)</u>
Total pension expense	94.7	135.3	230.0
Less benefits paid	<u>54.9</u>	<u>36.6</u>	<u>91.5</u>
Actuarial accrued pension liability as of September 30, 2004	<u>1,230.2</u>	<u>837.7</u>	<u>2,067.9</u>

¹ Does not include U.S. Tax Court and judicial branch.

Closing Comment

Clarity about the purpose of reporting will be essential. For example, could FASAB, like FASB, refer to the unfunded ABO as the minimum liability? Would this imply that in considering the various plans for transition, there exists a spectrum for measuring Social Security benefits "owed" ranging from the ABO to the "maximum transition cost"? If so, is that the message to send? And what are the implications for the budget? That may depend on how the periodic charge is handled. Will it be done in the context of articulated financial statements, or modify that in some way as FASB did? What would be the rationale?

Appendix A – Statement of Social Insurance

United States Government
Statements of Social Insurance
Present Value of Long-Range (75-Years, except Black Lung) Actuarial Projections

(In billions of dollars)	2004	2003	2002	2001	2000
Federal Old-Age, Survivors and Disability Insurance (Social Security):					
<i>Contributions and Earmarked Taxes from:</i>					
Participants who have attained age 62	411	359	348	309	266
Participants ages 15-61	14,388	13,576	13,048	12,349	11,335
Future participants (under age 15 and births during period) ..	12,900	12,213	11,893	11,035	10,088
All current and future participants	27,699	26,147	25,289	23,693	21,689
<i>Expenditures for Scheduled Future Benefits for:</i>					
Participants who have attained age 62	4,933	4,662	4,401	4,256	4,020
Participants ages 15-61	22,418	21,015	20,210	18,944	17,217
Future participants (under age 15 and births during period) ..	5,578	5,398	5,240	4,700	4,297
All current and future participants	32,928	31,075	29,851	27,900	25,534
Present value of future expenditures less future revenue ..	5,229 ¹	4,927 ²	4,562 ³	4,207 ⁴	3,845 ⁵
Federal Hospital Insurance (Medicare Part A):					
<i>Contributions and Earmarked Taxes from:</i>					
Participants who have attained eligibility age	148	128	125	113	97
Participants who have not attained eligibility age	4,820	4,510	4,408	4,136	3,757
Future participants	4,009	3,773	3,753	3,507	3,179
All current and future participants	8,976	8,411	8,286	7,756	7,033
<i>Expenditures for Scheduled Future Benefits for:</i>					
Participants who have attained eligibility age	2,168	1,897	1,747	1,693	1,681
Participants who have not attained eligibility age	12,054	10,028	9,195	8,568	6,702
Future participants	3,246	2,653	2,470	2,225	1,349
All current and future participants	17,468	14,577	13,412	12,487	9,732
Present value of future expenditures less future revenue ..	8,492 ¹	6,166 ²	5,126 ³	4,730 ⁴	2,699 ⁵
Federal Supplementary Medical Insurance (Medicare Part B):					
<i>Premiums:</i>					
Participants who have attained eligibility age	332	284	252	258	234
Participants who have not attained eligibility age	2,665	2,148	1,856	1,845	1,527
Future participants	891	688	600	593	404
All current and future participants	3,889	3,120	2,708	2,696	2,165
<i>Expenditures for Scheduled Future Benefits for:</i>					
Participants who have attained eligibility age	1,475	1,306	1,132	1,159	1,051
Participants who have not attained eligibility age	10,577	8,845	7,463	7,415	6,094
Future participants	3,277	2,622	2,238	2,206	1,514
All current and future participants	15,329	12,773	10,833	10,780	8,659
Present value of future expenditures less future revenue ⁶ ..	11,440 ¹	9,653 ²	8,125 ³	8,084 ⁴	6,494 ⁵
Federal Supplementary Medical Insurance (Medicare Part D):					
<i>Premiums:</i>					
Participants who have attained eligibility age	176				
Participants who have not attained eligibility age	1,857				
Future participants	618				
All current and future participants	2,651				
<i>Expenditures for Scheduled Future Benefits for:</i>					
Participants who have attained eligibility age	773				
Participants who have not attained eligibility age	7,566				
Future participants	2,431				
All current and future participants	10,770				
Present value of future expenditures less future revenue ⁶ ..	8,119 ¹				

Appendix B – Actuarial Note

ACTUARIAL NOTE

UNFUNDED OBLIGATION AND TRANSITION COST FOR THE OASDI PROGRAM

by Steve Goss, Alice Wade, and Jason Sch

SOCIAL SECURITY ADMINISTRATION

Number 2004.1

August 2004

Office of the Chief Actuary

1. Introduction

Measures of the unfunded obligation of the Old-Age and Survivors Insurance and Disability Insurance (OASDI) program for any period represent the shortfall of financial resources available under current law to cover the cost associated with scheduled benefits for the period. The unfunded obligation for any program must be defined on the basis of the intended financing of the program. Because the OASDI program is financed on essentially a current-cost or pay-as-you-go basis, the measure of open group unfunded obligation is appropriate. Programs that are intended to be essentially fully-advance funded require the use of other measures, reflecting a closed group participation perspective, to assess their unfunded obligation (or liability).

However, these closed group measures are more accurately described as theoretical measures of "transition cost" for the OASDI program. Estimates of the unfunded obligation vary depending on the valuation period and the assumptions used. Transition cost measures additionally vary depending on which plan participants are included.

The purpose of this actuarial note is to present, explain, and clarify the various measures of unfunded obligation and transition cost used in the context of the OASDI program.¹ Section 5 [below] contains definitions of the various concepts, as used by the Office of the Chief Actuary (OCACT), which appear throughout this note. [Table 1](#) [below] contains estimates of the open group unfunded obligation measured over different time periods. [Table 2](#) [below] includes estimates for other measures, referred to as transition cost for different groups of participants. All measures in these tables are estimated based on intermediate assumptions of Trustees Reports through 2004.

2. Open Group Unfunded Obligation

The open group unfunded obligation is consistent with a pay-as-you-go financing approach and is thus directly applicable for assessing the actuarial status of the OASDI program. The term obligation is used in lieu of the term liability, because liability generally indicates a contractual obligation (as in the case of private pensions and insurance) that cannot be altered by the plan sponsor without the agreement of the plan participants.

Estimates of the open group unfunded obligation for the 75-year projection period are given in [Table 1](#) for annual valuation dates starting with January 1, 1979. The specific year of the Trustees Report, which identifies the intermediate assumptions used in determining the

estimates, is the same as the year of the valuation date. Significant uncertainty surrounds the estimates for a period as long as 75 years. A discussion of this uncertainty for the most recent valuation date (January 1, 2004) is located in appendix E of the 2004 Trustees Report.² Estimates of the open group unfunded obligation for the infinite future are also shown in [Table 1](#) for valuation dates of January 1, 2003 and January 1, 2004. The unfunded obligation for the infinite future does provide a more complete and extended measure of the expected future financial shortfall for the OASDI program. However, the shortfall for the infinite future must be considered in the context of the period over which program modifications are needed, in this case, the infinite future. It is also important to note that the uncertainty surrounding estimates made for periods longer than 75 years would be much greater than that for the 75-year period (which, as noted above, reflects significant uncertainty). It would have been extremely difficult to make projections of today's economy and the numbers of various workers and beneficiaries from a perspective, for example, of 200 years ago. In addition, the infinite horizon estimates assume that the normal retirement age for those turning 62 after 2021 will remain at age 67, even though mortality is expected to continue improving. This means that eventually people may collect benefits for longer than they pay payroll taxes, on average.

Solvency for the OASDI program at any point in time means that the program is able to pay scheduled benefits in full, on a timely basis at that time. Solvency for any point in time is indicated by a zero or positive trust fund balance at that time. However, it is important to realize that the open group unfunded obligation for a period, as a single summarized measure, indicates the financial status of the program for that period taken as a whole and whether the program will be financially solvent at the end of that period. If the unfunded open group obligation over the period is zero or negative, this would *not* necessarily indicate solvency throughout the period.

In order to determine sustainable solvency it is important to consider whether solvency is achieved for the program at all times within the valuation period and beyond. Thus, in order to determine whether the program achieves "sustainable solvency for the foreseeable future", OCACT focuses on a 75-year projection period and uses the following criteria:

- The level of the combined trust funds at each point in time during the 75-year projection period must be zero or positive, and
- The level of the combined trust funds, expressed as a percent of annual program cost, must be stable or rising at the end of the 75-year period. (This indicates that the solvency of the OASDI program can be expected to be sustained well beyond the end of the period.)

3. Decomposition of the Unfunded Open Group Obligation over the Infinite Future
[Table 2](#) separates the unfunded open group obligation over the infinite future into two components from a generational perspective. These components are important for evaluating the financial status of a program that is designed to be "fully-advance-funded". The first of these two components, the "closed group transition cost", is the net present value of the transition cost that would be incurred if participation in the program were closed off to individuals under age 15 as of the valuation date.³ The second component is the net present value of the cost of providing scheduled benefits for future participants in the program (those under age 15 or not yet born on the valuation date) for the infinite future less the scheduled taxes they would be expected to pay. If this net shortfall for future participants is zero or negative, then scheduled taxes for future generations are expected to be sufficient to finance their benefits on a fully-advance-funded basis.

Under a pay-as-you-go program like the OASDI program, the taxes of each generation are used to pay the benefits of prior generations and are not used to advance fund their own benefits. Thus, the fact that taxes for future generations equal or exceed the present value of the cost of their own scheduled benefits is not relevant to the actuarial status of the program. Similarly, the closed group transition cost of the program is not relevant to the actuarial status of the program, because benefits of current program participants will be paid largely by the taxes of future generations, which are not reflected in this value.

The closed group transition cost may have specific applications in cases like that of the Federal Government closing the Civil Service Retirement System plan to persons newly hired after 1983. In general, however, this concept is only appropriate for the valuation of the actuarial status of an ongoing plan that has been intended to be essentially fully advance funded, such as plans covered under the Employee Retirement Income Security Act (ERISA).

For a social insurance plan that was designed to be financed on a pay-as-you-go basis with the expectation of a continuing pool of new entrants, like OASDI, the closed group transition cost cannot be applied as a measure of financial status because it is inconsistent with the design and intent of the program. However, the concept can be used in the context of a continuing social insurance program that is converting to another form, where there is a desire to keep the financing of the old and new forms separate for analytical purposes.

4. Maximum Transition Cost

The "maximum transition cost" represents the transition cost for continuing the Social Security program in a different form, with all payroll taxes for work after the valuation date credited to the new benefit form. The maximum transition cost is equivalent to the unfunded accrued obligation of a plan designed to be fully advance funded at the time of plan termination and would be an appropriate calculation to evaluate the actuarial status of an ERISA plan. However, this concept may be applied when a continuing plan that has been financed on a pay-as-you-go basis is being converted abruptly to a new form that will apply not only for future participants but also with respect to all future taxes or premiums of current participants.

5. Definitions

The definitions of various measures and the terms used in the attached tables are given below.

Accrued benefit obligations—This measure reflects future benefit obligations based on past earnings as of the valuation date. Thus, these accrued benefit obligations are relevant only to current participants as of the valuation date. The accrued benefit obligations are based on the primary insurance amount (PIA), the early retirement or delayed retirement factors, and other rules of payment. The accrued benefit obligations include:

- Benefits scheduled to be paid for current (i) retired-worker beneficiaries and (ii) disabled-worker beneficiaries who continue to be disabled after the valuation date.
- Retired worker benefits based on PIAs determined as of the valuation date for workers who have reached benefit eligibility age (62) and are not yet receiving benefits.
- Benefits calculated on a proportional past-service-credit basis determined as of the valuation date for current active participants under age 62. These benefits require a computation of a PIA (PIA), as of the valuation date, as if the worker had just become

eligible to receive a disabled-worker benefit. These benefits are then adjusted so they may be viewed as benefit levels of a worker aged 62. The adjustments are made depending on the type of worker, as illustrated below.⁴

- For workers who survive to age 62 and are not disabled after the valuation date, PIA would be indexed to age 62 by the Social Security Average Wage Index, and would then be multiplied by the fraction (age as of the valuation date - 22) / 40.
- For workers who survive to age 62, are not disabled as of the valuation date, and become disabled before age 62, PIA_{DIB} would be indexed to the date of disability by the Social Security Average Wage Index, and would then be multiplied by the fraction (age as of the valuation date - 22) / (age as of the date of disability - 22).
- For beneficiaries who are disability beneficiaries as of the valuation date, recover from disability before age 62, and survive to age 62, benefits would equal the disability benefit scheduled to be paid until recovery. After reaching age 62, benefits would be computed based on indexing the final disability benefit received before recovery ($PIA_{DIB-RECOV}$) to age 62 by the Social Security Average Wage Index, and would then be multiplied by the fraction (age as of recovery from disability - 22)/40.
- Benefits for auxiliary beneficiaries would be based on the primary worker's benefits as described above.

Closed group transition cost—This measure is computed like the open group unfunded obligation for a 100-year projection period, with the exception that future participants are not included. Specifically, the future cost and future scheduled tax income for only current participants are included in the calculations along with the trust fund assets at the start of the period. The period is extended to 100 years past the valuation date in order to capture the lifetime of all the current participants included in the valuation.

Current participants—All individuals (generations) who are age 15 and older as of the valuation date. This includes all individuals who have been, are, or will be workers and/or beneficiaries. (As noted in [Table 2](#), the age 15 varies slightly for valuation dates before 1984.)

Future cost—The value of OASDI program benefits scheduled in current law and the cost of administering the program.

Future participants—Future workers and beneficiaries, who are under age 15 or not yet born, as of the valuation date. (As noted in [Table 2](#), the age 15 varies for valuation periods before 1984.)

Future scheduled tax income—OASDI tax income scheduled in current law.

Maximum transition cost—This measure represents the cost of meeting the accrued benefit obligations of the old form while continuing the Social Security program in a completely different form, with all payroll taxes for work after the valuation date credited to the new benefit form. The maximum transition cost is determined as of the valuation date for current and past participants only. It is computed as the difference between

- (a) The present value of all future accrued benefit obligations payable on the old form; and

Appendix B— Actuarial Note: Unfunded Obligation and Transition Cost for OASDI

- (b) The value of the assets on the valuation date plus the present value of revenue from taxation of future accrued benefit obligations payable on the old form.

The projection period ends 100 years past the valuation date in order to capture the lifetime of all the current participants included in the valuation.

Open group unfunded obligation—This measure is determined as of the valuation date over a specified time period (such as over the long-range 75-year period). It is computed as the difference between:

- (a) The present value of the future cost of the program between the valuation date and the end of the specified time period, and
- (b) The sum of the assets in the trust fund as of the valuation date and the present value of the future scheduled tax income of the program between the valuation date and the end of the specified time period.

Future scheduled tax income and cost are projected using the intermediate assumptions for the indicated Trustees Report (the year of the Trustees Report corresponds with the year of the valuation date). All current participants, as well as future participants to the system, over the specified time period are included in the computations.

Past participants—Those who contributed money to the program or received benefits from the program and are no longer alive as of the valuation date.

Sustainable solvency—This term is used to indicate that the combined OASDI Trust Funds are expected to be able to pay all scheduled benefits on time over the 75-year projection period and to continue paying all benefits on time for the foreseeable future. Thus, the following two conditions are required to be met:

- (a) The level of the trust funds at each point in time during the 75-year projection period is zero or positive, and
- (b) The level of the trust funds, expressed as a percent of annual program cost, is stable or rising at the end of the 75-year period.

Valuation date—Beginning of the projection period or January 1 of the starting projection year. This date defines the point in time for determining present values.

**Table 1.—Open Group Unfunded Obligation for the Combined
Old-Age and Survivors Insurance and Disability Insurance (OASDI) Program**

Valuation date: January 1 of year	Ultimate valuation interest rate	Open group unfunded obligation for the 75-year projection period beginning at valuation date			Open group unfunded obligation for the infinite future projection period beginning at valuation date		
		As a percent of future:			As a percent of future:		
		Present value ¹	Taxable payroll	GDP	Present value ¹	Taxable payroll	GDP
1979	6.600	\$0.8	—	—	—	—	—
1980	6.080	1.4	—	—	—	—	—
1981	6.080	1.5	—	—	—	—	—
1982	6.080	1.5	—	—	—	—	—
1983	6.080	-0.1	—	—	—	—	—
1984	6.080	0.0	—	—	—	—	—
1985	6.080	0.3	—	—	—	—	—
1986	6.080	0.3	—	—	—	—	—
1987	6.080	0.4	—	—	—	—	—
1988	6.080	0.6	0.6	—	—	—	—
1989	6.080	0.8	0.7	—	—	—	—
1990	6.080	1.2	0.9	—	—	—	—
1991	6.392	1.1	0.9	—	—	—	—
1992	6.392	1.7	1.3	0.5	—	—	—
1993	6.392	1.8	1.3	0.5	—	—	—
1994	6.392	2.7	2.0	0.8	—	—	—
1995	6.392	2.7	2.0	0.8	—	—	—
1996	6.392	2.9	2.0	0.8	—	—	—
1997	6.295	2.8	2.1	0.8	—	—	—
1998	6.398	2.9	2.1	0.8	—	—	—
1999	6.399	2.9	1.9	0.8	—	—	—
2000	6.399	2.9	1.8	0.7	—	—	—
2001	6.399	3.2	1.7	0.7	—	—	—
2002	6.090	3.3	1.7	0.7	—	—	—
2003	6.090	3.5	1.8	0.7	\$10.5	3.8	—
2004	5.884	3.7	1.8	0.7	10.4	3.5	1.2

¹Present value in trillions of dollars as of the valuation date.

Notes:

1. All estimates are based on the intermediate set of economic and demographic assumptions (Alternative II, or Alternative II-B for 1982 through 1990) in the OASDI Trustees Report for the specified valuation year.

2. All values are subject to uncertainty, especially values over the infinite horizon.

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August 2004

Table 2. Decomposition of the Unfunded Obligation and Transition Cost for the Combined Old-Age and Survivors Insurance and Disability Insurance (OASDI) Program

Valuation date: Ultimate January 1 of year		Decomposition of infinite future unfunded obligation								
		Closed group ¹ transition cost (100-year projection period)			Net shortfall for future participants only through the infinite future			Maximum transition cost (100-year projection period)		
		As a percent of future:			As a percent of future:			As a percent of future:		
		Present value ²	Taxable payroll	GDP	Present value ²	Taxable payroll	GDP	Present value ²	Taxable payroll	GDP
1980	6.080	\$5.3	—	—	—	—	—	—	—	—
1981	6.080	5.5	—	—	—	—	—	—	—	—
1982	6.080	5.4	—	—	—	—	—	—	—	—
1983	6.080	4.8	—	—	—	—	—	—	—	—
1984	6.080	3.9	—	—	—	—	—	—	—	—
1985	6.080	4.3	—	—	—	—	—	—	—	—
1986	6.080	5.0	—	—	—	—	—	—	—	—
1987	6.080	5.2	—	—	—	—	—	—	—	—
1988	6.080	5.4	5.0	—	—	—	—	—	—	—

Appendix B— Actuarial Note: Unfunded Obligation and Transition Cost for OASDI

1989	6.080	5.7	5.0	—	—	—	—	—	—	—
1990	6.080	6.7	5.2	—	—	—	—	—	—	—
1991	6.392	6.2	5.2	—	—	—	—	—	—	—
1992	6.392	6.9	5.4	2.2	—	—	—	—	—	—
1993	6.392	7.2	5.3	2.1	—	—	—	—	—	—
1994	6.392	7.9	5.8	2.3	—	—	—	—	—	—
1995	6.392	7.7	5.8	2.3	—	—	—	—	—	—
1996	6.392	8.4	5.8	2.2	—	—	—	\$8.9	6.2	2.3
1997	6.295	7.5	5.7	2.1	—	—	—	8.7	6.6	2.5
1998	6.398	8.0	5.6	2.2	—	—	—	9.5	6.7	2.6
1999	6.399	8.3	5.5	2.1	—	—	—	10.2	6.7	2.6
2000	6.399	8.8	5.3	2.0	—	—	—	10.8	6.5	2.5
2001	6.399	9.6	5.3	2.0	—	—	—	11.7	6.4	2.4
2002	6.090	10.1	5.2	2.0	—	—	—	12.2	6.3	2.4
2003	6.090	10.5	5.3	2.0	—	—	—	12.6	6.3	2.4
2004	5.884	11.2	5.3	2.0	-\$0.8	-0.3	-0.1	13.5	6.4	2.4

¹The closed group consists of current participants. The youngest age in the closed group is 15, 16, 17, and 18 for 1980-1983 respectively.

²Present value in trillions of dollars as of the valuation date.

Notes:

1. All estimates are based on the intermediate set of economic and demographic assumptions (Alternative II, or Alternative II-B for 1982 through 1990) in the OASDI Trustees Report for the specified valuation year.
2. All values are subject to uncertainty, especially values over the infinite horizon.

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¹ Additional details and explanation are included in the document titled "Measuring Solvency in the Social Security System" by Stephen C. Goss. This document is located on the internet at rider.wharton.upenn.edu/~prc/SocialSecurityReformChp2.pdf.

² This report can be found at the following internet location:
www.socialsecurity.gov/OACT/TR/TR04/index.html.

³ As noted in Table 2, the age 15 varies slightly for valuation dates before 1984.

⁴For the purpose of this measure, the accrued benefit obligations for current active participants under age 22 are assumed to be zero.

Appendix C – Selections from SFAS 87's Glossary

Appendix D: GLOSSARY

264. This appendix contains definitions of certain terms used in accounting for pensions.

Accumulated benefit obligation

The actuarial present value of benefits (whether vested or nonvested) attributed by the pension benefit formula to employee service rendered before a specified date and based on employee service and compensation (if applicable) prior to that date. The accumulated benefit obligation differs from the projected benefit obligation in that it includes no assumption about future compensation levels. For plans with flat-benefit or non-pay-related pension benefit formulas, the accumulated benefit obligation and the projected benefit obligation are the same.

Actual return on plan assets component (of net periodic pension cost)

The difference between fair value of plan assets at the end of the period and the fair value at the beginning of the period, adjusted for contributions and payments of benefits during the period.

Actuarial funding method

Any of several techniques that actuaries use in determining the amounts and incidence of employer contributions to provide for pension benefits.

Actuarial gain or loss

See **Gain or loss**.

Actuarial present value

The value, as of a specified date, of an amount or series of amounts payable or receivable thereafter, with each amount adjusted to reflect (a) the time value of money (through discounts for interest) and (b) the probability of payment (by means of decrements for events such as death, disability, withdrawal, or retirement) between the specified date and the expected date of payment.

Allocated contract

A contract with an insurance company under which payments to the insurance company are currently used to purchase immediate or deferred annuities for individual participants. See also **Annuity contract**.

Amortization

Usually refers to the process of reducing a recognized liability systematically by recognizing revenues or reducing a recognized asset systematically by recognizing expenses or costs. In pension accounting, amortization is also used to refer to the systematic recognition in net pension cost over several periods of previously *unrecognized* amounts, including unrecognized prior service cost and unrecognized net gain or loss.

Interest cost component (of net periodic pension cost)

The increase in the projected benefit obligation due to passage of time.

Net periodic pension cost

The amount recognized in an employer's financial statements as the cost of a pension plan for a period. Components of net periodic pension cost are service cost, interest cost, actual return on plan assets, gain or loss, amortization of unrecognized prior service cost, and amortization of the unrecognized net obligation or asset existing at the date of initial application of this Statement. This Statement uses the term *net periodic pension cost* instead of *net pension expense* because part of the cost recognized in a period may be capitalized along with other costs as part of an asset such as inventory.

Prior service cost

The cost of retroactive benefits granted in a plan amendment. See also **Unrecognized prior service cost**.

Projected benefit obligation

The actuarial present value as of a date of all benefits attributed by the pension benefit formula to employee service rendered prior to that date. The projected benefit obligation is measured using assumptions as to future compensation levels if the pension benefit formula is based on those future compensation levels (pay-related, final-pay, final-average-pay, or career-average-pay plans).

Service

Employment taken into consideration under a pension plan. Years of employment before the inception of a plan constitute an employee's past service; years thereafter are classified in relation to the particular actuarial valuation being made or discussed. Years of employment (including past service) prior to the date of a particular valuation constitute prior service; years of employment following the date of the valuation constitute future service; a year of employment adjacent to the date of valuation, or in which such date falls, constitutes current service.

Service cost component (of net periodic pension cost)

The actuarial present value of benefits attributed by the pension benefit formula to services rendered by employees during that period. The service cost component is a

Unfunded accumulated benefit obligation

The excess of the accumulated benefit obligation over plan assets.

Unfunded projected benefit obligation

The excess of the projected benefit obligation over plan assets.