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Apples to Apples: A Financial Aid Reporting Methodology

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Confusion about the treatment of merit-based or categorically based aid has revealed the need for a generalized financial aid reporting methodology. This article suggests a procedure for financial aid reporting that recognizes differing treatment of need-based aid before and after awarding, offers general information about the theoretical concepts underlying the proposed procedure, and provides an example of how the procedure may be applied.

Student financial aid is an extremely complex field with complicated methodologies for establishing financial need, Expected Family Contribution, and financial aid packages. Perhaps because of this complexity, no clear methodology has developed or evolved to perform financial aid reporting functions. Lacking a methodology, such questions as how much need has been met during a given award year, both by categories of aid and by aid in the aggregate, have been unanswerable for more than forty years. In particular, confusion about the treatment of merit-based or categorically based aid for reporting purposes has led to the frequent observation that comparison of financial aid from institution to institution is akin to comparing apples to oranges.

The purpose of this paper is to suggest a procedure for financial aid reporting that has been developed to address the financial aid portion of the Common Data Set. Before the procedure can gain widespread acceptance, theoretical concepts underlying the methodology must be explained in detail to the financial aid community. The authors intend to publish these details in a future monograph. This article, however, will be limited to a general description of the procedure and the definitions that are required, and an example of its application. The article is designed to provide guidance that hopefully will begin to clarify the discussion of merit aid and merit aid reporting.

The Common Data Set

The Common Data Set (CDS) initiative may have generated the most stimulus toward the development of a generalized financial aid reporting methodology since the beginning of professional financial aid administration. The CDS is a collaborative effort led by the four major publishers of college books, The College Board, Peterson's, U.S. News & World Report, and Wintergreen/Orchardhouse. It includes the participation of data developers and providers in the higher education community, primarily institutional researchers, and has as its stated goal "to improve the quality and accuracy of information provided to

all involved in a student's transition into higher education, as well as to reduce the reporting burden on data providers" (see Common Data Set Initiative).

Through the CDS, reporting burden on individual schools is reduced by virtue of a common questionnaire containing data items with clear, standard definitions that classify the specific cohort of students relevant to each item. Hence, only one reporting effort is required to answer the overwhelming bulk of the questions asked by four major college book surveyors. Potentially, the questions pertaining to financial aid can be answered by one computer program. An additional contribution of the CDS initiative to financial aid reporting has been to stimulate inquiry into the confusing differences between the concepts of need-based aid and aid that went to meet need. In particular, the CDS highlights the change in the character of merit aid over the financial aid packaging cycle.

Ex Ante and Ex Post

Financial aid is a cyclical process. Part of what makes it so difficult to analyze statistically is that the definitions of traditionally used terms change during the cycle. The primary example is the concept of "need-based aid."

At the beginning of the cycle, need-based aid refers to the kind of aid available. Federal Pell Grants, for example, are need-based aid because they may be given only to students who demonstrate financial need under the federal methodology. Aid that is not need based, but still may be used to meet a student's demonstrated need, is usually classified as "merit" or "categorical aid." A third classification of aid exists: aid that is outside the need and merit process. Such aid is never defined as meeting need at the beginning of the cycle (examples are private student and parent loans), so this article will refer to it as "outside aid."

By the end of the cycle the definition of need-based aid has shifted from "aid available" to "aid awarded." After the packaging decisions are made and the results are known, the definition of need-based aid becomes all aid awarded that was classified as need based at the beginning of the cycle, and all merit or categorical aid administered by the institution that also contributed to meeting the student's need. Merit or categorical aid that is awarded in excess of need is classified as non-need-based aid by the CDS. Most outside aid is also classified as non-need-based aid.

Because of this cyclical definition shift, it would be extremely helpful to have a short-cut method for referring to the

“before and after” aspect of the award process. To do so, this study borrows two concepts from economics, *ex ante* and *ex post*. *Ex ante* refers to the status of all relevant variables in a system before any decisions are made or implemented. It sometimes refers to the plans of agents within a system before the plans are put into effect. Applying the term to financial aid, it refers to the status of all aid variables before packaging begins.

Ex post refers to the status of all variables in the system after the fact. It refers to the situation after the decisions have been made; the awards have been offered, accepted, and paid to the student’s account or to the student directly; and the resulting actions have worked their way through the system. As an example, an athletic scholarship would usually be characterized as merit or categorical aid *ex ante*, but would be included in calculations of the amount of need-based aid *ex post* to the extent that it helped to meet the student’s need. Understanding the concepts of *ex ante* and *ex post* greatly enhances the ability to think about and discuss the allocation of merit aid.

The Three *Ex Ante* Buckets

The difficulty of getting financial aid professionals to agree on classification schemes is legendary, and it is often said that where you stand with respect to what gets reported and how depends on where you sit. This is particularly true when one attempts to classify all *ex ante* aid as need based, merit, or outside.

Ex ante need-based aid can only fall into a need-based category *ex post*, because need must be demonstrated and documented for the aid to be awarded. However, the disposition of merit aid is not so easy to resolve, partially because of disagreement over its definition. Schools that meet full need regard all non-need-based aid as merit aid, a term they see as slightly pejorative. Schools that award merit aid without regard to need tend to differentiate non-need-based aid between merit and categorical, insisting that the term merit aid implies some demonstration of merit. Outside aid (such as private student loans and Federal PLUS Loans), normally falls outside the categories of need-based and merit aid. However, PLUS Loans are used to meet need often enough to cause confusion and undermine the credibility of the need-based, merit, outside classification procedure. Plainly, a greater level of abstraction is required.

The authors propose to address this conundrum by establishing a methodology for *ex ante* aid classification that is sufficiently abstract as to require very little agreement. It will then be demonstrated that applying this classification method to an accounting identity provides the foundation on which a

coherent and consistent reporting methodology can be constructed.

The classification procedure is based on the idea that, at the beginning of the packaging cycle, all financial aid can be allocated to one of three categories, which can be referred to as the three *ex ante* buckets:

- Only Meet Need (aid that only meets need *ex post*)
- Can Meet Need (aid that can meet need *ex post*)
- Never Meet Need (aid that never meets need *ex post*)

Note that this categorization is bright line: all aid that is awarded must fall into one of these categories. It does not matter the source of the aid, how it is defined, how it is awarded, or whether it is accepted or earned/paid. It only matters whether, *ex post*, the award must meet need, may meet need, or never meets need. The construct is rendered by the following equation, which is the accounting identity.

$$\begin{array}{rccccrcccc}
 \text{Total} & & & & \text{Total} & & \text{Total} & & \text{Total} & & \\
 \text{Aid} & = & \text{Aid that} & + & \text{Aid that} & + & \text{Aid that} & + & \text{Aid that} & & \\
 \textit{Ex Ante} & & \text{Only Meets} & & \text{Can Meet} & & \text{Never Meets} & & & & \\
 & & \text{Need} & & \text{Need} & & \text{Need} & & & &
 \end{array}$$

Aggregate Areas and Packaging Sequence

Two additional constructs are required for establishing a coherent reporting system. First, each institution must group its individual financial aid awards by source and characteristics and must establish a sequence in which the awards are packaged *ex post*. Most schools administer and track their financial aid with computerized systems, often integrated with the admissions, registrar, and student accounts systems. Each type of award is given from a specific fund and is identified by a specific fund code. Institutions administering any significant amount of financial aid will find it difficult, if not impossible, to group financial aid awards into the various required categories using fund codes alone. It is therefore desirable to attach wider aggregate identifiers (called Aggregate Areas by some schools) to individual funds that will permit them to be placed in larger groups according to their source or function. Aggregate Areas already exist within the SCT SISPlus Student Record system (field SF080) and a similar field, also called Aggregate Area, exists in the PeopleSoft Student Administration System. Institutions that are unable to include Aggregate Areas in their record-keeping systems may nevertheless add them to the reporting process by

developing computer routines to map fund codes to Aggregate Areas.

Second, most institutions follow some recognizable pattern in the packaging of their awards and can establish an order in which awards are packaged for reporting purposes, even if the awards are not always packaged in the same order during the award cycle. This order of packaging is referred to hereafter as the Packaging Sequence. Note that the Packaging Sequence is an *ex post* concept and only needs to be built into the reporting programs. There is no requirement to build it into the record keeping system.

Table 1 is an example of both the assignment of Aggregate Areas to types of awards and of placing the awards in the Packaging Sequence. Aggregate Areas such as PELL, FSEOG and FWS contain the Federal Pell Grant, Federal Supplemental Education Opportunity Grant, and Federal Work Study programs, respectively. The categories ANNUAL (Annual Gifts) and ENDOW (Endowment) are more complicated in that they contain gifts to the institution with myriad restrictions but are nevertheless reserved for students who demonstrate financial need. In this case, ANNUAL includes gifts to the institution that are to be used in the current year for financial aid while ENDOW includes grants funded by the proceeds of previous year gifts that were restricted to financial aid. FEDGT is a grouping of all federal grants that do not require a demonstration of federal or institutional need for eligibility; for example, it includes federal grants for promising biology students and ROTC scholarships. OUTGT is a grouping of external scholarships such as Rotary or Lions Club scholarships, usually won by the individual student but tracked by the institution. ATHSC (athletic scholarships) and STAFF (staff tuition benefits) are self-explanatory.

It is crucial for the reporting structure that all the awards included in a particular Aggregate Area fall into the same *ex ante* reporting bucket, i.e. Only Meet Need, Can Meet Need or Never Meet Need. Also, as schools begin to use financial aid reporting procedures to assist with the analysis of net tuition revenues, it is important that Aggregate Areas discriminate between awards that are funded by the forgiveness of tuition and those that are funded by gifts and endowments. For purposes of exposition and discussion, all awards within a single Aggregate Area will be referred to and treated as a single award in the remainder of this article.

Note that this example is taken from the experience of the authors' universities; other schools applying this construct

It is crucial for the reporting structure that all the awards included in a particular Aggregate Area fall into the same ex ante reporting bucket.

may assign different Aggregate Areas and Packaging Sequences. What is essential to the construct is that all of an institution's awards must be allocable to one of the three *ex ante* buckets.

TABLE 1
Example: Aggregate Areas and Packaging Sequence

Aggregate Areas	Type of Aid	Description
Only Meet Need		
1 PELL	Grant	Federal Pell Grant
2 FSL	Loan	Federal Stafford Loan (subsidized portion)
3 PERK	Loan	Federal Perkins Loan
4 NSL	Loan	Nursing Student Loan
5 FWS	Work	Federal Work-Study
6 FSEOG	Grant	Federal Supplemental Educational Opportunity Grant
7 SSIG	Grant	State Student Incentive Grant
8 ANNUAL	Grant	Annual gifts
9 ENDOW	Grant	Grants funded by the endowment fund
10 SSCE	Grant	Summer school & continuing education scholarships
11 UNIV	Grant	University grants (institutional student aid)
Can Meet Need		
12 DEPGT	Grant	Departmental grants (undergraduate only)
13 GRANU	Grant	Annual gifts not requiring demonstrated need
14 GREN	Grant	Endowment fund grants not requiring demonstrated need
15 ATHSC	Grant	Athletic scholarships
16 STAFF	Grant	Staff benefits
17 FEDGT	Grant	Federal grants
18 OUTGT	Grant	Outside grants/external scholarships
Never Meet Need		
19 UFSL	Loan	Federal Stafford Loan (unsubsidized portion)
20 PLUS	Loan	Parent Loans for Undergraduate Students
21 OUTLN	Loan	Student outside loans
22 PPL	Loan	Parent private loans
23 CMPJB	Work	Campus employment (other than FWS, ERS)
24 ERS	Work	Employment referral service

Source: Georgetown University

Classification of Awards

Because most schools keep their student financial aid data in some form of computerized data base, any kind of financial aid reporting or survey response requires that a computer program be written. In order to implement the methodology, program code representations for the *ex post* concepts "need-based aid" and "non-need-based aid" must be developed. To produce these representations it is important to have a functional understanding of how the concepts are represented in the data.

Ex Ante Classification of Awards. More formal definitions of the three *ex ante* need categories, or “buckets,” follow.

- Only Meet Need refers to those awards that may be given only in response to demonstrated federal or institutional need. They include Federal Pell Grants, FSEOG grants, subsidized Federal Stafford Loans, Federal Perkins Loans, and in the case of many institutions, institutional grants.
- Can Meet Need refers to those awards that have no federal or institutional need requirement but, when awarded, count toward meeting the student’s need. Athletic scholarships and staff benefits are good examples. Outside grants usually fall into this category.
- Never Meet Need refers to aid that never counts toward meeting the student’s need. It usually takes the form of aid that is awarded only after the student’s need has been met by aid from the other aid categories. Unsubsidized Federal Stafford Loans and Federal PLUS Loans (parent loans) generally are not used to meet need. Note however, if an institution’s policy is to use PLUS Loans to meet need, then to make the methodology consistent these loans must be placed in the Only Meet Need or Can Meet Need *ex ante* buckets, as appropriate.

Ex Post Classification of Awards. Surveys rarely ask *ex ante* questions such as how much need-based aid was awarded. Rather, they tend to ask *ex post* questions such as how much aid was awarded that met need. The characteristics of the *ex post* categories become relevant here, and are—

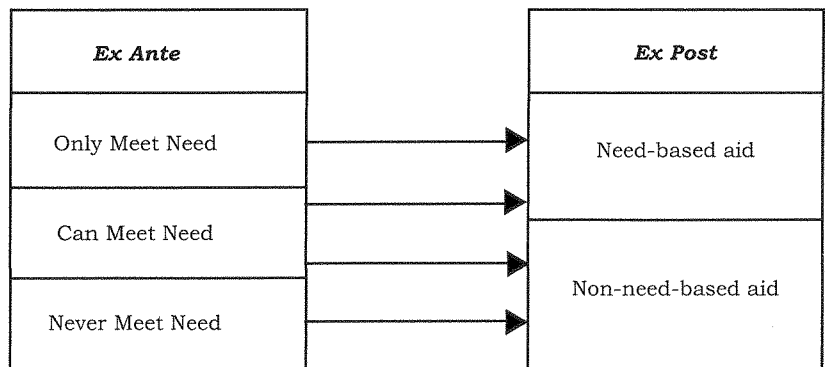
- Need-based aid (aid that met need *ex post*)
- Non-need-based aid (aid that was either “beyond need,” or simply never used to meet need *ex post*).

These distinctions are important because the computation of the *ex post* concept of aid that met need requires that *ex ante* awards that Only Meet Need, Can Meet Need and Never Meet Need be mapped into the *ex post* categories of Need-based and Non-need-based aid. Note that through the remainder of the article, the terms “Need-based,” and “Non-need-based” are capitalized when referring to *ex post* aid. This is to distinguish the *ex post* concepts of Need- and Non-need-based aid from the traditional financial aid usages of these terms.

Figure 1 illustrates the concept. The mapping of Only Meet Need and Never Meet Need awards is relatively straight-

forward. In general, all *ex ante* Only Meet Need awards are Need-based *ex post* aid. All Never Meet Need awards are Non-need-based aid *ex post*. Can Meet Need awards, on the other hand, must be allocated between Need-based and Non-need-based aid, *ex post*, based on the relationship of the Can Meet Need award to the student's need. The approach recommended is that to compute Can Meet Need aid that is Need-based *ex post*, add successively *ex ante* Only Meet Need and Can Meet Need aid in the order of the Packaging Sequence until all of the student's need is exhausted. Can Meet Need aid that falls within need *ex post*, is classified as Need-based. Can Meet Need awards received by a student in excess of need are classified as Non-need-based aid.

FIGURE 1
Mapping of *Ex Ante* to *Ex Post* Aid

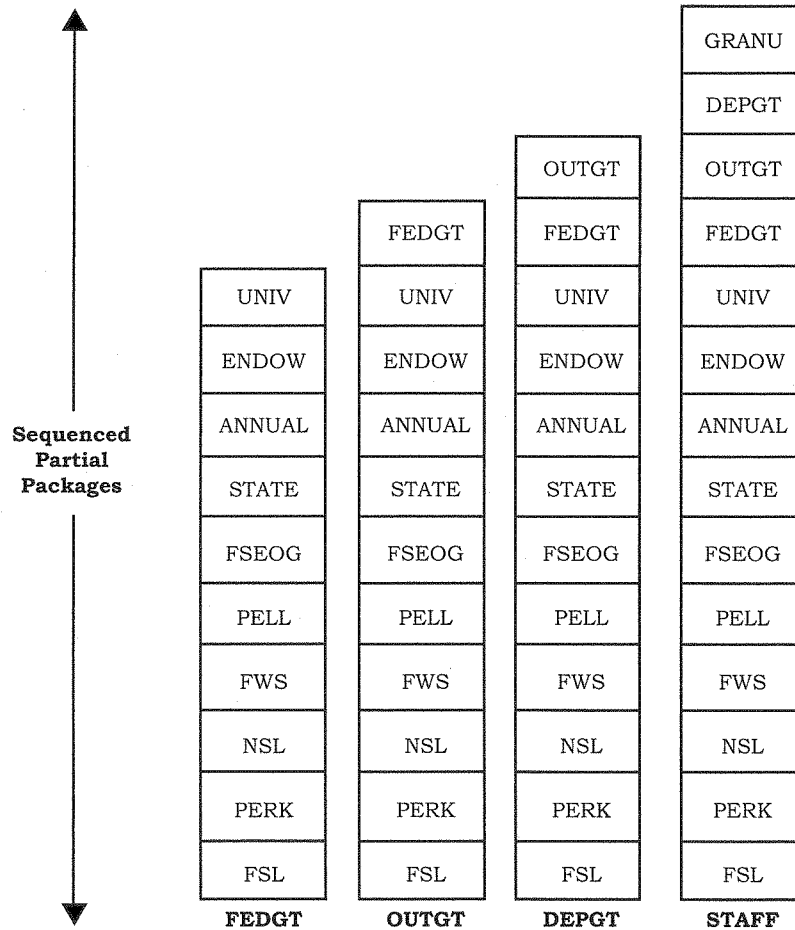


Sequenced Partial Package

The Packaging Sequence is the order in which awards are conferred for reporting purposes, and varies from institution to institution. Establishing a packaging sequence for groups of students, if not all, is important for developing an algorithm or procedure for allocating the portions of an individual's awards of Can Meet Need aid that are Need-based and Non-need-based *ex post*. The results of experimentation by the authors suggest that placing the awards in the order in which the institution wishes need to be met works best. To compute the allocation effectively, the computer program must compute the amount of financial aid awarded up to but not including each Can Meet

Need award in each student's package. This total is referred to as the *Sequenced Partial Package*. Note that to compute accurately Need-based and Non-need-based aid *ex post*, a Sequenced Partial Package must be computed for each Can Meet Need award that a student receives. Figure 2 illustrates the computation of Sequenced Partial Packages for several Can Meet Need aid categories.

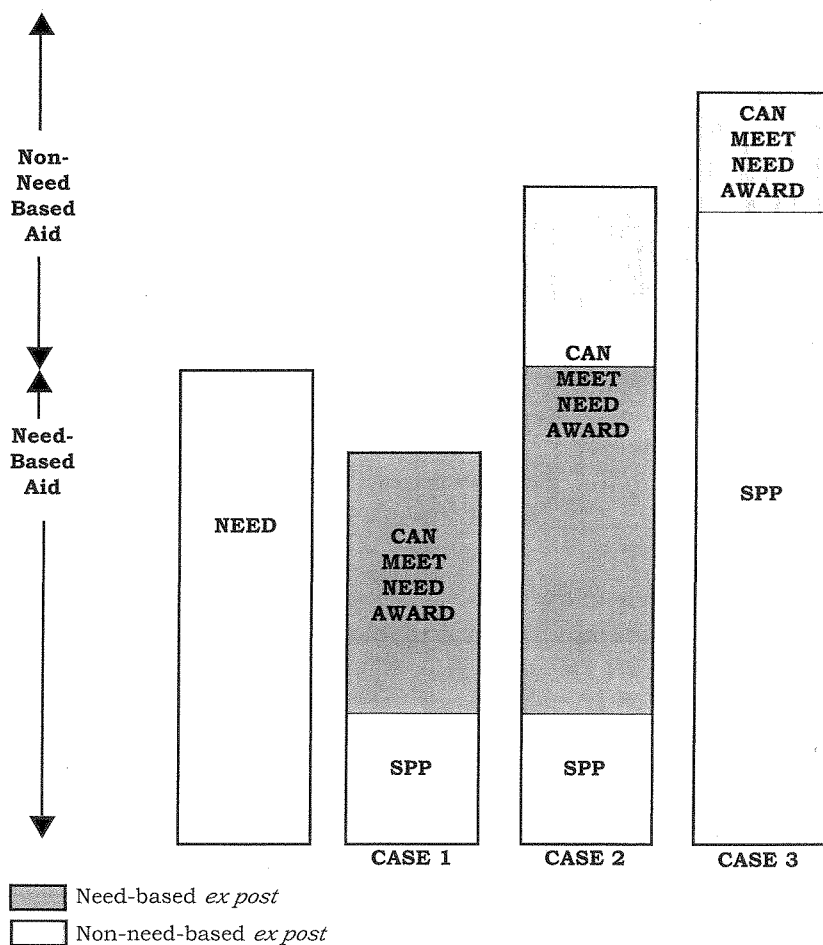
FIGURE 2
Example: Sequenced Partial Packages (SPP)
for Can Meet Need Awards



Applying the Procedure: Three Can Meet Need Aid Cases

The quintessential problem in financial aid reporting is how to establish *ex post* how much of the individual Can Meet Need awards conferred by the institution is Need-based (goes to meet need) and how much is Non-need-based (is in excess of need). To develop an algorithm to perform this calculation, three situations must be taken into account. Figure 3 illustrates the treatment of the three Can Meet Need Aid cases.

FIGURE 3
Relationship of a Can Meet Need Award to Its Sequenced Partial Package (SPP)



The quintessential problem in financial aid reporting is how to establish ex post how much of the individual Can Meet Need awards conferred by the institution is Need-based.

In Case 1, the sum of the Can Meet Need award's Sequenced Partial Package (SPP) (which includes the sum of the student's *ex ante* need-based awards plus those Can Meet Need awards that fall below the student's need in the packaging sequence) and the Can Meet Need award itself is less than or equal to the student's need. In this case *all* of the Can Meet Need awards are classified as Need-based aid *ex post*.

In the second case, the Can Meet Need award's SPP is less than the student's need, but the sum of the SPP and the Can Meet Need award is greater than the student's need. In this case the portion of the Can Meet Need award that falls below the student's need is classified as Need-based aid, *ex post*, while the portion that falls above need is classified as Non-need-based aid *ex post*.

In the third case, the Can Meet Need award's SPP is equal to or greater than the student's need, which means that, by definition, *all* of the Can Meet Need award falls above need and is classified as Non-need-based, *ex post*.

For a practical application of the methodology, consider the example shown in Table 2, which uses the packaging policies of the University of Michigan. A student has a cost of attendance of \$29,636, and a need of \$21,377. The student receives an Only Meet Need (need based, *ex ante*) Annual gift (ANNUAL) of \$12,148 and Can Meet Need awards consisting of a \$3,000 Departmental Grant (DEPGT), an Endowed Grant not requiring need (GREND) of \$12,988, and an Outside Grant (OUTGT) of \$1,500. The SPP plus the DEPGT totals \$15,148, which is less than the student's need, placing the DEPGT in the need-based column. The SPP of the GREND, \$15,148, is less than the student's need, while the sum of the SPP and the GREND, \$28,136, is greater, indicating that the GREND must be allocated between *ex post* Need-based aid and Non-need-based aid. The portion of the award that met need is computed by subtracting the SPP of the GREND from need ($\$21,377 - \$15,148 = \$6,229$). The portion of the GREND that is Non-need-based *ex post* is computed by subtracting the need-based portion from the award ($\$12,988 - \$6,229 = \$6,759$). The student's need being fully met, the remaining award, OUTGT, falls into the Non-need-based column. In sum, while the student received \$12,148 of need-based aid, *ex ante*, he received \$21,377 in Need-based aid, *ex post*, his full need thereby being met.

TABLE 2
Example: Student Receiving Merit Aid in Excess of Need

	Aggregate Area	Award	Ex Ante			Sequenced Partial Package	Ex Post	
			Only Meet Need	Can Meet Need	Never Meet Need		Need-based Aid	Non-need-based Aid
Cost of Attendance		\$29,636						
Need		\$21,377						
Annual Gift Grant	ANNUAL	\$12,148	\$12,148			\$0	\$12,148	
Departmental Grant	DEPGT	\$3,000		\$3,000		\$12,148	\$3,000	
Endowed Grant (no need requirement)	GREND	\$12,988		\$12,988		\$15,148	\$6,229	\$6,759
Outside Grant	OUTGT	\$1,500		\$1,500		\$28,136		\$1,500
Total		\$29,636	\$12,148	\$17,488	\$0		\$21,377	\$8,259

Summary and Conclusions

This article has presented a methodology for financial aid reporting that, in particular, attacks the complex issue of the allocation of merit or categorically based aid. To implement the methodology, financial aid practitioners should—

- ◆ Develop an intuitive understanding of the concepts of *ex ante* and *ex post* so that they will have a clear understanding of issues associated with the change in the definitions of need-based aid and merit aid over the packaging cycle.
- ◆ Assign Aggregate Area mnemonics to each award that classify them by source and function.
- ◆ Assign each of the Aggregate Areas to one of three *ex ante* buckets:
 - Only Meet Need
 - Can Meet Need
 - Never Meet Need

- ◆ Place the Aggregate Areas in a Packaging Sequence that reflects the order in which the institution wishes need to be met.
- ◆ Develop computer programs that—
 - Map Only Meet Need and Never Meet Need awards to the *ex post* categories of Need-based aid and Non-need-based aid, and
 - Map Can Meet Need (merit-based and categorically-based) awards to the *ex post* categories by computing a Sequenced Partial Package for each award, then following the procedures outlined above for each of the three Can Meet Need cases.

Clearly, the methodology offered in this article is not the last word on the subject. Thirty-five years worth of growth in complexity cannot be rationalized in one paper. In particular, issues associated with presentation will take years to work out, which is one of the reasons this article makes such a strong effort to abstract from them. However, the authors believe that this methodology constitutes a sound beginning and encourage members of the profession to take the development of a financial aid reporting methodology seriously. Without a proactive discussion on appropriate vehicles for ascertaining where each financial aid department stands vis-à-vis its students, its institution, and the departments of its peer institutions, the aid community could find itself defending reporting practices that may not meet the data needs of others involved in formulating financial aid policy.

References

Common Data Set Initiative. 2002. [On-line]. Available <http://www.commondataset.org>

American Council on Education (1998). *Straight talk about college costs and prices. The final report and supplemental material from the National Commission on the Cost of Higher Education*. Westport, CT: Greenwood Publishing Group.