

Integrated Control for State and Local Governmental Entities with an Eye to Fiscal Enhancements

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Abstract: *The state and local governmental [SLG] accounting system is driven by a number of recording rules and regulations. These are codified by the Governmental Accounting Standard Board referencing related agencies such as the OMB and have been the basis of the recording rules in most countries. These recording rules can also be used as the basis for management monitoring and control in SLG entities. From this perspective, we examine the following five extensions of the usual SLG recording context that can be used to improve efficient and effective use of the resource committed to those in charge of the governmental system. To this extent then the following considerations pertain to any SLG in the global context: 1. Extending Prudent Stewardship, 2. Central Procurement: Negotiation Leverage, 3. Recording the Budget, Appropriations, Allocations, Allotments and Encumbrances, 4. Tracking Accountability in the GCA&GLTL Groupings, and 5. Calibrating Early Payment Status [EPS] Discounts. We conclude with two further interesting issues for future research.*

Keywords: *Prudent Stewardship, Early Payment Discounts, Procurement Management*

1. Introduction

The world of Governmental Accounting is usually focused on the interpretations of GASB #34. The GASB, the Government Accounting Standard Board, is the official rule setting group for State and Local governmental [SLG] accounting. GASB #34, passed in 1999, is the codification of the rules and regulations that can be applied in the GAAP-variant context called the Modified Basis of Recording/Accounting [MBR]. This SLG-information creation system identifies the economic events to be recognized in the SLG-Accounting Information System [AIS] employed in the Public and Municipal Context following the rules of the GASB and eventually produces, through worksheet re-adjustments to the SLG accounts, financial statements that are required to conform to the Generally Accepted Accounting Principles: USA [GAAP/IFRS]. The final version of the SLG-AIS recording system can be thought of as the best practice application of the blending of GASB #34 , OMB Circular-133 (See OMB Weblink), the recent Yellow Book “Regs” (See Dalkin (2010)) and GAAP. While these rules are developed and pertain to the SLG in the USA, GASB #34 has formed the basis of most of the accounting rules applied globally. [Robb and Newberry, (2007)]

These SLG-AIS recording rules and regulations have important impacts on the accounting integrity of the SLG entity: namely (1) Safeguarding Assets, (2) Conforming to the legislative Rules and Regulations of the various jurisdictions that impact the Municipality, (3) following the GASB/OMB/GAAP/IFRS-recording rules, and (4) adhering to the guidelines offered under the Policies, Procedures and Protocols scripted by managers. However, in addition to these important AIS recording functions, there is also the possibility of extending the SLG-AIS to provide managerial information for monitoring and control. The intention here is to improve the efficiency and effectiveness of the SLG use of resources. This is the point of departure of our paper in which we have identified the following five (5) opportunities in the SLG-AIS context to create management information and actions with the intention to improve the efficiency and the effectiveness of the resources conversion process in service of the SLG-Mission:

- 1.) Extending Prudent Stewardship throughout the Fiscal Management System,
- 2.) Central Procurement: Negotiation on Purchasing Terms,
- 3.) Recording the Budget, Appropriations, Allocations, Allotments and Encumbrances,
- 4.) Tracking Accountability in the GCA&GLTL Groupings, and
- 5.) Calibrating Early Payment Status [EPS] Discounts

These managerial suggestions also will have meaningful impact in the global context as they are derived from economic considerations which are generalizations to efficient and effective management. As implied by Robb and Newberry (2007), in the global context the GSL rule codifications drawn from GASB #34 are often the underpinning of many of the related country codifications and so are a starting point to exploring the AIS recording and the related managerial suggestion that can empower the SLG to improve the effective and efficient operation of their public entity.

Fiscal Improvements in the SLG Milieu

Based upon our experience as a former SLG-Auditor for one of the Big-4 public accounting firms, as a teacher of accounting in the SLG area using the Freeman et al. (2010) text, and as researchers in this exciting and interesting milieu, we now detail suggestions that address the improvement fiscal management system.

2. Extending Prudent Stewardship throughout the Fiscal Management System

The idea of Prudent Stewardship comes from the US-Federal Government arbitrage rules for tax-exempt organizations using federal funds. Summarizing from Freeman et al. (2010, p.292), the idea is as follows: The Federal Government [FED] supports many projects at the State and Local governmental levels. For approved SLG-applications, the designated federal funds are usually delivered/transferred shortly after the Federal Budget is passed for the fiscal year. The federal managers of the various Federal-Funds like to send out the appropriated funds/money as soon as possible as this reduces the “risk” that the non-distributed funds can be “re-appropriated” due to alterations of priorities necessitated by changes in the world, which changes the FED-funding priorities. As the control over funds is one of the measures of power in the Federal tax-redistribution system, it is important to avoid “getting raided” by re-appropriations. One way to avoid losing funds through re-distribution is to transfer the funds to the qualifying SLG applicant long before that they are needed. Another important aspect of the Federal re-distribution system is to “grow” the funding possibilities. To do this, the FED has invented an ingenious concept that we term *Prudent Stewardship* Investment, as this is a more indicative activity than simply project-funding “arbitrage”. Under this “regulation” here summarizing the practical working of the arbitrage or prudent stewardship imperative, the funds that are not able to be immediately employed pertaining to the FED-approved project must be invested in a “prudent” way as to produce revenue from the otherwise “idle” cash. In fact, sometimes the Federal contract can contain a provision that if the idle funds were in fact not so invested, then the Federal Auditors can, at their discretion, impute an “expected” revenue return on the funds that were sent to the SLG-entity and reduce the amount of the grant by the “expected prudent arbitrage” interest forgone.

Proposal I Using the concept of Prudent Stewardship, we suggest that the SLG entity create the following system for the active deployment of temporarily idle cash called the: Cash Deployment Model [CDM]. We will use the term idle cash to mean the cash that has been received from any source: Federal transfers, Gifts/Grants, Other SLG-InterFund Transfers, or BAN/TAN/RAN contracts, Cash inflows from: General Property Taxes, Use/Activity taxes, Transfers: principally from Special Purpose Enterprise “funds”, OFS: principally from the Capital Project Funds, Special Revenue Fund Accruals, and Cash from Asset Dispositions but that is not projected to be needed to satisfy Fund related liabilities for at least a week. To make the CDM as effective as possible, we assume that the SLG entity will have:

- (1) Software driven e-AIS system for the timely recording and transfer of Cash to a secure bank account. It would defeat the purpose of the CDM to have various non-linked Cash accounts that accumulate cash as this would provide only a very sub-optimal result,
- (2) An “e-trade” link that can be programmed to select from a portfolio of “safe” or prudent investments. We have confidence in: *E-Trade* [See Refs] and *Schwab* [See Refs]. We have no conflict of interest regarding either of these e-trading sources; we caution in using “free”—i.e., “no-fee” trading sources; the

controlling adage is: *There is no such thing as a Free-Lunch*. This trading portfolio must be “liquid” meaning that the Buys and Sells are instantaneous. This instantaneous feature is normal and has been part of the Day-Trader world for many years, and

- (3) An incentive; the FED has a “stick” incentive. If there is not a prudent investment use of cash, the SLG entity will usually have an interest earning amount imputed, and this will be used as a “Qualifying-Expenditure” off-set. Qualifying expenditure off-sets are always unfavorable to the SLG entity. We suggest that the SLG-CFO also develop a positive incentive or a “carrot”. In this regard, we like the “Beat the T-Bill rate” benchmark. This works as follows: Use the average T-bill [90-day average, from the following USDT website: <http://www.treasurydirect.gov/RI/OFAuctions?form=histQuery> as the base-line. Any cash earnings over or under this T-Bill benchmark will be used in the evaluation of the manager of the CDM. In this modeling context, the FED resources can also be part of the CDM as will be all the other cash inflows. We suggest that the SLG entity negotiate with the FED or other contract funding sources in order to develop “extended-incentives”. For example, one recommendation may be that T-Bill rate be used to impute the FED offset, and for the remainder of the actual earnings 50% will accrue as part of the FED offset and the other 50% will be part of the SLG-cash pool. This would provide an incentive for the SLG to try to beat the benchmark.

A word of warning Such a system of Extended-Incentives would only work if the T-Bill benchmark is the latest quote and not the average. For example, the average 90 day T-Bill rate for 2008 was 1.372 however, due to the sub-prime debacle caused by *Lehman Bros. LLP* the T-Bill rate finished the year at 0.081! How exactly the tracking of the performance of the performance of the CDM relative to the T-Bill benchmark is used to motivate and evaluate the manager of the CDM is complicated as Windfall Gains and Windfall “Losses” are not simple to calibrate and to integrate into the performance evaluation system. We suggest that this be left to the CFO, and that the CDM be tracked on a monthly basis to avoid serious short falls. In this regard we strongly recommend to the CFO to read the fascinating *Harvard Business Review* case of the Vyaderm Pharmaceuticals, Simons & Reinbergs (2000) where many of the same issues that we have noted above are part of the details of that case.

3. Central Procurement: Negotiation on Purchasing Terms

It is remarkable that more municipal entities do not realize the tremendous purchasing leverage that they have due to the resources that are spent over the year. Referencing the work of Yarkin (2009, p.26) to underscore the idea of the possibility of SLG using their purchasing power to leverage their negotiation with vendors consider the following quote of Mr. Tim Pawlenty, Governor of the State of Minnesota, USA:

“Minnesota has 490 school districts and charter schools, each of which purchases IT, food services, textbooks and supplies, - - -. We should require them to come together for bulk purchasing in order to lower costs and eliminate waste. - - - We should also require local units of government to use the leverage of the state’s buying power to purchase commodities such as road salt, paper and IT services at a reduced price, unless they can find a better price themselves.”

The reason that such leveraging exists is that the vast majority of SLG entities operate under a quasi-balanced budget legal mandate, which means that all the expected estimated Revenue must be expended over the fiscal year. So essentially almost 100% of the cash inflows are required to be cash outflows; typically on the order of 45% of these cash outflows will be expended for salaries. See for example the 2008 USA relative Wage and Salaries statistics: <http://www.irs.gov/taxstats/article/0,,id=170718,00.html> leaving 55% to be expended through purchasing to support all the activities that the SLG entity engages in over the revenue year. This sizeable expenditure must be controlled through a Central Purchasing Bureau [CPB]. If the expenditures are decentralized then the negotiation power of this vast sum of money, 55% of the Appropriations, will be squandered.

Proposal II By charging the Manager of the CPB with economizing the purchasing power accruing to the 55% of the budget of the SLG entity, discounts and favorable payment terms can be effected and these can produce a considerable “direct cash” contribution to the SLG entity. Consider the two points of negotiation: Quantity Discounts and Terms Related Discounts. Regarding *Quantity Discounts* by planning or staging purchases—sometimes called “bundling”—all of the purchasing needs of the various bureaus of the SLG can be aggregated. This creates from a large number of small purchase requests a relatively formidable purchasing opportunity. This large purchase can be a major factor in negotiating with various vendors. There are two models that seem to be used in this regard: Bid-Letting and Direct Contact of a “portfolio” of Approved Vendors. Bid-Letting is now relatively simple and follows the “e-Bay” model. Both of the two models work in essentially the same way. In the Bidding contest one posts the specifications of the *Proposed Purchase* in a Bidding Mall or on an e-Bay type link. In the Direct Contact mode, the manager of the CPB emails/contacts the various pre-approved vendors and offers to them the exclusive bidding possibilities. Then the bidding and negotiation start; the variables in play are: Quality, Quantity Discounts, Timing/Timeliness of Delivery, Time Related Payment Terms, Warranties, Manufacturer and Vendor, Return Policies and Adjustment & Allowances. For an excellent overview of the issues that are the drivers in the procurement area see OECD (2007), in particular the information offered by Austria, p. 96 and Germany, p. 90.

For example, one purchasing agent for a university system was able to get: Quantity Discounts for all purchases of paper for the various printers and printing needs for the campus of .85% off the usual retail price, and then, in addition, he was able to negotiate (1) time payment discounts that were higher than usually offered, (2) extended time for which the discounts were valid, and (3) an increase the time to when the account was required to be settled. All of these considerable benefits were possible due to the large amount of money that was authorized to be expended for printing needs. An illustrative example will help to indicate the significant amount of savings that can be effected by bundling and leveraging the large single purchase in negotiating. Using the median statistics for municipal budgets for 2009 assume that there will be an Appropriation for 2010 of \$55.6 Million using the 55% relationship about \$30 Million will be expended through the CPB. If incremental/additional discounts of .075% for Quantity Discounts and .02% for time related discounts with a ten day extended payment horizon the total possible yearly conservation would be: \$28,495.50: [$\$30\text{Million} \times (.00075\%)$] + [$\$30\text{Million} \times (.00075\%)$] x (.0002)]. This is of course a sizable amount of “incremental” recourse—almost \$30,000—added solely through the bundling and careful negotiation with the invited vendors.

4. Recording the Budget, Appropriations, Allocations, Allotments and Encumbrances

One of the central issues in good fiscal management is the control of the amount of the expenditures as discussed in the section where we examined Centralized procurement; in addition, the control of the timing of expenditures is critical to insure good fiscal management. Using the standard legal requirement to record, in the accounts of the SLG entity, the Budget provides the opportunity to effect both Amount and Timing resource control.

Proposal III There are a number of ways that the “Brakes” can be applied to expending of resources so that the resources can be expended in a logical and orderly manner. The logic of such “Braking” comes from the fact the Budget in the legal contract for the SLG entity and so as the Budget is usually driven by Estimated Revenues and then the Appropriations or spending plan follows. This is to say that the spending plan is contingent on the conversion of the Estimated Revenue to Financial Assets which eventually are collected in Cash which will be used in the satisfaction of Related Fund Liabilities. In this system of Estimates and Expected Revenue Conversions, it is often the case that there are shortfalls that require what are called “mid-term” adjustments to put the spending plan “back on track” given the current information regarding the revenue realizations. Also recall the discussion above relative to re-appropriation at the Federal level. Here the idea is control over the timing of spending, as the SLG context is a zero-sum system. This means that “temporarily” taking appropriated resources from Peter because Paul currently needs cash to execute a particular plan, under the assumption that in the near future there will be sufficient resources/cash available for Peter, works only if there is 100% accuracy in the Revenue and Conversion estimates. When this is not the case, only Paul’s projects are realized. As Peter and Paul realize this, they both try to secure/protect their cash resources as early as possible—sometimes referred to as the “Resource Scramble”. This works against the wise and timely use of resources needed to (1) effect prudent stewardship CDM management, and (2) against the bundling of resources needed to affect the often significant conservation of resources gains through the CPB. In this system of “Braking Control,” the lynchpin is the Encumbrance. Encumbrances are the pre-approval review and system of logical protection of the integrity of the resources that are to be “parceled” out over the year, and which eventually become Expenditures. Because Encumbrances are the means to timing-control, let us examine them in detail. Encumbrances are most simply thought of as two-stage control: (1) Pre-approval review, and then, after the approval to write a purchase contract is granted (2) the Blocking of the Appropriation while Central Procurement negotiates the most favorable terms of the purchase contract. An example will help to illustrate the two stages of the process. Assume that the Department of Streets and Maintenance [S&M] has received an Appropriation of \$467,000 to be expended over the year. All of the control activity will be done in the Subsidiary Ledger: AEE-S&M controlled by the General Ledger account: Appropriation: AEE—i.e., this control account is for all the SLG appropriations. The “A” represents Appropriations, “E” represents Encumbrance and “E” represents Expenditures. At the date that the budget is passed there will be a posting in the subsidiary account AEE:S&M for Cr. \$467,000. This means that for expenditure pertaining to Streets and Maintenance that department is authorized to expend \$467,000 over the year. However, there may be 10 or 15 members of the S&M department who have the authorization to expend resources. Each of these individuals will likely have different administrative limits on the amount that they can request to purchase. Assume that one of the S&M decision makers

[DM], who has an administrative purchase approval limit of \$25,000, sees the need to purchase snow and ice treatment “spread” that is distributed on the streets after snow and ice storms. This is a substance that lowers the melting point of snow and ice so that it can be easily removed from the streets. During the winter, when demand is high, the cost of this substance essentially quadruples. Therefore it is wise to secure the needed quantity of “spread” early in the fiscal year which starts 1 July. On 7 July, the S&M DM puts in a request to lock-in a future contract price for the “spread”. After, researching the amount that remains in inventory, and the climatic projections for the winter season, the expected utilization a purchase request is made. This request first goes to the Encumbrance Bureau where it is evaluated for: authorizations and administrative limits. Assume that it is in the administrative purview of the manager who made the request to purchase such an item, meaning that the person has the Authorization Approval. However, as the expected cost as researched by the CPB, is \$37,500, and so is likely to go over the \$25,000 limit for this individual, the Encumbrance manager returns the request for additional signatures that are required for purchases over \$25,000. This is the first stage sometimes called the Authorization Stage. Once all the approvals and authorizations are in order, the Encumbrance Bureau blocks the Appropriation in the AEE: S&M at the expected cost of \$37,500 and then sends it to the CPB for the final contracting. At this point there will be an entry in the AIS general ledger:

Encumbrance	\$37,500
Reserve for Encumbrance	\$37,500

Which is also posted in the AEE: S&M subsidiary ledger. The balance in S&M subsidiary ledger account will be: Cr. \$429,500 [Cr. \$467,000 and Dr. \$37,500]. This means that there is \$429,500 available to be expended even though at this point CPB is researching the best price for the “spread” which may take a month or so. This is the “Blocking” of the appropriations while the CPB has the time to negotiate the best price and terms. Assume that someone with the proper authorizations requests an expenditure of \$450,000. This will be denied as the balance in the AEE:S&M subsidiary ledger would become Dr. 20,500 which is not permitted, as a Dr. balance indicates that the account is **Over-Expended**. Here is a perfect illustration of the reason for “blocking” the AEE:S&M subsidiary ledger account. If the encumbrance for the “spread” were not recorded, and the expenditure were to be made for \$450,000, the balance in the AEE:S&M subsidiary ledger would be Cr. \$27,000 [Cr. \$467,000 and Dr. \$450,000] which means that when the CPB actually negotiated a very favorable price for the “spread” of \$32,000, that expenditure could not be approved as there are insufficient funds in the AEE:S&M subsidiary ledger account as the amount remaining to be expendable is \$27,000, but the price for the “spread” is \$32,000. As one can imagine, this creates chaos in the system, as it is essentially the Peter and Paul swapping as discussed above. The implications are that (i) further funds will need to be found, possibly borrowed, thus incurring additional interest expense as well as (ii) the likelihood the price of \$27,000 will no longer be valid and the cost will be higher—two very negative consequences of failing to manage the timelessness of the expenditures. Returning to the example, assume that the CPB secures the price of \$32,000. This price and contract are sent back to the individuals authorized to make the purchase for their final approval, not only of the price, but also of the terms. Once this is finally approved, the following entry is made:

Reserve for Encumbrance	\$37,000	
Encumbrance		\$37,500
Expenditure: S&M	\$27,000	
Accounts Payable		\$27,000

Posting this in the AEE:S&M account yields a balance of \$440,000 [Cr. \$467,000; Dr. \$37,500; Cr. \$37,500 and Dr. \$27,000]. This illustrates the important timing control of expenditures that can simply be created through Encumbrance control.

In addition to this timing control affected through Encumbrances, there are two additional stages that can be used to control expenditures: Allocations and Allotments. These are Period Controls as opposed to Encumbrances which is an Event Control. An Allocation is an apportionment for a particular period, and Allotments are apportionments within that Allocation Period. For example, a common system is as follows: the Budget Appropriation is allocated in proportion to the expected revenue inflows. For the CY 2011, assume, for example, that the SLG entity's revenue projected from the major revenue sources is expected as follows relative to the four quarters: 15%, 25%, 35%, and 25%. The allocations of the Appropriations would be made in the same temporal proportions, and of course controlled by Encumbrances. Then within each quarter, Allotments may be used to exact further control. These Allotments are usually done based upon DM sense of the intra-period timings. For example, for the third quarter where the appropriation authorization is 35% of the budget appropriation, the allotments may be driven by what the DM knows about the demand for funds including work related salaries. In this case, the allocations over the 92 days in the third quarter could be 75% for the first 30 days and 25% over the remaining 62 days. This cascading system of Allocations and then Allotments provides the best inter-temporal control for the sensible use of the to-be-expedited revenue, and importantly, there is usually no possibility of violating the legal mandates that must be followed regarding appropriations which is of course, the expenditure aspect of the legal budget. The only condition is that the SLG entity MUST not over expend as it cannot by law make up over-expenditure in the next budget year. Therefore, Appropriations, Allocations, Allotments as well as the Encumbrances are useful fiscal navigation tools in helping the SLG entity stay on the Fiscal plan, which aids in more efficiently using the Revenue resources. As a parenthetic note: In our experience, it is rarely the case that Encumbrances, Allocations and Allotments are used together in a coordinated way; we feel that this negates the possibilities of enhanced resource management and control.

5. Tracking Transaction Accountability in the GCA&GLTL Groupings

One of the interesting variations in the governmental GASB #34 world compared to the usual GAAP/IFRS recording in the for-profit world is that asset dispositions are tracked in very different ways. This difference creates in many instances the loss of critical management evaluation information. The simplest way to highlight the difference is to examine the journal entries in the two systems. Let us assume that Earthmoving Equipment is purchased for \$245,000 on 1 June 2005. The useful life is estimated by management using the IRS-asset guidelines as eight (8) years, and the salvage/re-sale value is estimated to be \$33,800 at the end of the "useful or productive" life. Assume that this capital asset is

sold at the end of 2012 for \$25,000. At the time of the of disposition sale, the following entries are made for the GAAP context:

GAAP

Allowance for Depreciation	\$200,000	
Cash	25,000	
Loss on Sale	20,000	
Equipment		\$245,000

In this case, for the GAAP entry, we recognize the loss of \$20,000 which has implications for the organizations asset management and maintenance. From a managerial perspective, we would hope that over time that the net effect of these sales would be around zero—i.e., sometime there would be a Loss other times a Gain. If not, this is a managerial indicator that the period matching through depreciation is somewhat askew, or that there is possible mismanagement in that asset dispositions are being pitched at too low a price, the usual case, or perhaps at too high a price – which suggests an unrealistic useful life calibration thereby creating matching issues. This information has implications relative to the careful evaluation of the other two ways to “purchase” the use of a Capital Asset: Leasing or Rental. The point here is that tracking the Gains and Losses on Capital Asset dispositions is critical managerial decision making information. See the excellent work of (Lea & Thygerson, 1994) in this regard. This is the usual perspective in the GAAP world where individual transaction information is routinely available in the AIS. Consider now the GASB #34 context.

The SLG context is well developed by Freeman et al. (2010) referencing GASB #34 [section 1400.115-116] they note:

“*Expenditures*, not expenses, are measured in government fund accounting. - - - [3] Depreciation expense is neither a source nor a use of governmental fund financial resources and, thus is not properly recorded in the account of such funds.”

Following GASB #34 [section 117] indicates that information about Capital Assets should include:

- (1) Beginning- and end- of- year, with accumulated depreciation presented separately from historical cost, (2) Capital acquisitions, (3) Sales or other dispositions, and (4) Current-period depreciation expense.

However, this information, which does not specifically require the identification of specific transaction “Gains or Losses”, is usually only done on the Government-wide final worksheet adjustments—not in the SLG-AIS accounts—and so are usually aggregated for final statement purposes so that individual item analysis is rarely possible. (See Freeman et al. (2010): Illustration 11-4, p.564). Therefore, there is a systemic difficulty in retrieving gain and loss of information regarding asset dispositions.

Proposal IV To fully understand how this “Gain and Loss” information “disappears” in the AIS of the SLG entity, and how one can simply “re-account” for it, let us consider a typical set of AIS entries. The SLG-AIS entry configuration for asset dispositions is that the sales of Capital Assets are recorded in two accounting groups of accounts: The General Fund [GF] and the GCA & GLTL Non-Fund [GCA&GLTL] groupings. In the GF, which is permitted to hold Cash but which is NOT permitted to hold or report

Capital Assets [CA], only the Cash from the asset disposition is recorded in the GF as: Dr. Cash and Cr. Other Financial Source [OFS]: Sale of CA. In the GCA&GLTL the sold Capital Asset is removed from the books at its carrying value, which is the Initial Cost and related “putting-in-service expenditures” less the loss/reduction in value due to deterioration—i.e., what in the For-Profit GAAP context is called “depreciation”. It is also interesting that in the SLG context rarely is depreciation recorded in the AIS accounts as it is a worksheet adjustment that comes from the reduction in the Capital Assets over the year and is usually a year end overall adjustment. The recording in the GCA&GLTL is simply Dr. NA and Cr. GCA for the overall deterioration in value in the capital asset accounts. There is NEVER an allowance for depreciation but rather the deterioration is a direct account reduction. In this set of entries, the Gain or Loss on the sale is not recorded in the accounts, but only as a work sheet reconciliation item to the Government Wide statements that are required at year-end. For example, consider the simple example introduced above. The entries for the CA disposition would be:

General Fund

Cash	\$25,000	
OFS: Sale of CA		\$25,000

GCA&GLTL

NA	\$45,000	
GCA: Truck		\$45,000

Important for our argument is that the loss of \$20,000 which is highlighted in the Accounts of the For-Profit is not identified directly in the SLG-AIS accounts. In our experience, there is no external evaluation of the amount of “deterioration” recorded, and there is NO Accumulated Depreciation account which would allow funding and gearing requirements to be anticipated for the SLG.

In summary, due to the nature of the Fund and Non-Fund recording, the critically important economic exchange valuations are often not part the SLG management’s system of evaluation regarding the efficient use of the capital assets. In fact, we are familiar with situations, best characterized as systematic “scams”, in which the “deterioration” in capital assets, in particular cars and trucks, was grossly accelerated, rendering the Capital Assets at very low book values. These vastly undervalued Capital Assets were then sold to special interest individuals at “presumed” gains! In these cases, the GF received some Cash and recorded an OFS. The CA was written off the books of the GCA&GLTL accounts where the “gain”, presumably a “positive” sign regarding the asset management, was created by mis-managing the deterioration and selling the valuable but undervalued Capital Assets to special interest groups where there were kick-backs involved as the “compensation”. Such opportunity for mismanagement is enabled by the nature of the Fund and Non-Fund recording system. To correct this problem, and to make the SLG managers aware and attentive to the mismanagement potentials, we propose the following solution:

- (1) that a Macro-Module be created in the SLG-AIS software that: tracks deterioration entries at the subsidiary CA level; this is to say the credits to the CA for deterioration be accumulated for reporting purposes. Currently, the Cr. Entries are not summarized over the years, and are just period reductions so that at the start of every year all that is retrievable are the netted out values in the CA accounts. For

example, at the beginning of 2010, the particular capital asset in the example above has a value of \$45,000. We are NOT aware that the original cost was \$245,000, and that \$200,000 of deterioration was taken. All management sees is the value of the Capital Asset of \$45,000 and the valuable managerial information is not discernable, and

- (2) That ANY asset exchanges track all of the same information that is recorded by the SLG-AIS that is required according to GASB #34 [section 117] which is the same information as required by the For-Profit GAAP accounting rules! There is a GOOD reason why this information should part of the accounting generated information; it has meaningful managerial and control implications. Therefore, when an asset is sold a report is abstracted from the GF, and GCA&GLTL accounts taking the Cash increase from the GF and the reduction of the balance in the GCA accounts. This will be the book value of the asset, and added to that will be the tracked or accumulated depreciation. For our example: the report will note: Cash Received: \$25,000 for the Sale of a Capital Asset; Book Value \$45,000 for which deterioration/ deprecation have been taken since 2004 and totaled \$200,000. This will allow anyone, including SLG-Internal Auditors or any of the Grant-Auditors, to have all of the information that will allow an evaluation of the economics of the disposition event for monitoring and control purposes.

Such monitoring for control is the linchpin in the COSO requirements that are the driving force in the For-Profit context. There is no reason why this important Capital Exchange information for the SLG-entities should not be readily available and simply retrievable disposition information using AIS-Macro-generated "Disposition"-reports.

6. Balancing Early Payment Status [EPS] Discounts

The last major issue that we will detail is that of Early Payment Status [EPS] discounts. These are discounts that may be taken if the taxpayer pays the General Property Tax [GPT] levy early. For example, the GPT is levied on 14 February 2010 and due to be paid on 15 July 2010. However, if a taxpayer pays the levy, or any portion thereof, before the close of business 15 May 2010 they receive a discount of x%. The important question addressed is: How can these EPS discounts be set so that they "economically" encourage payment within the EPS discount period? To begin this section, let us consider the AIS recording of the GPT levy. Assuming the dollar values are as below, it is often the case that at the time of the property tax levy the following SLG-AIS entry is made:

General Property Taxes Receivable [GPTR]	\$134,098,291	
Allowance for Uncollectible GPTR		\$6,973,111
Allowance for Early Payment Discounts		2,413,769
Revenue: GPT		124,711,411

In this SLG recording context, the credit to revenue is the expected cash flow for the period due from the GPT levy as authorized from the Budget passed. Note that the two allowances are netted out directly against the revenue; this make perfect sense in that for the \$134,098,291 GPT levied and due to be paid, one recognizes that not all of the taxes will be collected. Specifically 5.2% of the levy or \$6,973,111 are

not expected to be converted to cash. Further, IF those holding property pay what is owed early—during the EPS period—then they received a discount of 1.8%. This EPS-allowance in total will be \$2,413,769. These two allowance accounts are certainly related. The higher the EPS discount, the lower the allowance percentage is likely to be. This makes economic sense. It simply says that if property holders receive a very high discount, then one would suppose that many individuals would pay early to take advantage of the discount. This reduces the number of individuals that delay paying, and who therefore run into the predictable “difficult” and unanticipated situations in which they do not have the resources to pay the GPT when due. In the above abstracted example, the two allowances are on the order of 3:1. It is interesting that in practice the ratio: Allowances for Uncollectable: Allowance for EPS seems to be relatively constant longitudinally, although it does vary considerably by cross-section. This suggests that there is usually no consideration given to experimenting with the EPS discount to encourage collections and thereby reducing the collections. If that were to be the case, one would observe that the Allowance ratio would also vary longitudinally.

In summary, the Cash expected to be received from this levy is \$124,711,411 [\$134,098,291 – (\$6,973,111 + \$2,413,769)]. Here we recognize that Cash flow is synonymous with Revenue. However, this begs the critical question: Why should the SLG-entity offer a discount for early payment? There are three reasons:

- (1) the longer people do not pay, the greater the chance that events will make it difficult for them to pay, and that they will have to default on what is owed,
- (2) the SLG can usually invest such early payments before it is needed to be expended either in a partner bank, or as part of the prudent stewardship fund investment, or
- (3) Having cash on hand will essentially eliminate the need to engage in short-term borrowing to cover Inflow and Outflow timing mismatches.

However, the issue that we wish to address is: Assuming that EPS discounts are sound economically how does the CFO of the SLG arrive at the actual discount to be offered?

Proposal V A reasonable calibration, one that we use in our course, and which in one form or another is found in practice, is to set the EPS discount at levels that are tied to the bank lending rates to low- and high-risk but credit worthy individuals. The “range”-calibration, is dynamic as it changes with the bank rates. Let us examine the working of these calculations, and then address their actual setting in a practical situation. The logic underlying setting the EPS discount using the bank lending rates is “arbitrage”—or incurring an interest cost to pay-off a debt where the EPS discount is greater than the cost of borrowing—i.e., a beneficial debt-swap. The process that we will suggest has the following two-stages:

- Stage I: Is the calculation of the EPS discount that is “breakeven”, meaning that the Cost of borrowing is equal to the Saving from the EPS, and

- Stage II: Using this breakeven information, the CFO experiments with savings variants to overall increase collections in relation to non-payments of the GPT.

These two stages are best detailed through an example. For the first stage, the SLG-CFO estimates the cost of borrowing. Assume that according to the municipal charter that there is an EPS discount for all taxes paid on or before 21 April of the year of the levy. The CFO, after discussion with various banks in the municipality, collects or develops the following information: (1) The range of interest to be charged for a loan characterized as: “an average non-insured risk, second-lien subordinated, fixed-rate, non-variable payment date. Assume that the *per annum* range of interest rates reported from the various banks surveyed is: [6.89% to 8.04%], (2) the CFO assumes that the average repayment time for the bank loan will be 90 days: in this case 12 July 2011 [for loan counting purposes; 21 April 2011 to 12 July 2011 is 90 interest days on a 365 day year], and (3) the CFO calculates expected or mid-range GPT bill to be \$39,089, which is the median estimated industrial property tax bill for the municipality. Using the Excel Formula APPs [ACCRINTM] for a repayment in 90 days from the date of borrowing of \$39,089 for the range of interest rates to be charged by the banks of [6.89% to 8.04%] the interest cost to the individual borrower will be in the range of: [\$605.06 to \$706.04]¹. This is the Range that can be used to estimate breakeven EPS discount that would, due to arbitrage, render the taxpayer indifferent. This indifference or breakeven point will be used by the CFO to set the actual EPS discount rate. Continuing with the example, the CFO picks the mid-point in the above interest interval, \$655.55 [(\$605.06 + \$706.04)/2], to set the EPS discount. In this case, the general EPS breakeven discount percentage will be 1.6771% [\$655.55/\$39,089]. To illustrate that 1.6771% is the approximate breakeven rate. Consider the Costs and Savings for this Stage I information. When taxpayer, #123, borrows \$38,433.45 [\$39,089 x (1-.016771)] at the mid-point of the interest range [7.465%] and sends it to satisfy the tax bill the following entry will be made on the SLG entity’s books:

Cash	\$38,433.45	
Allowance for Early Payment Discounts	655.55	
General Property Taxes Receivable [#123]		\$39,089.00

Here the *Savings* is \$655.55.

The *Cost* to the borrower will be \$644.56, assuming that the loan of \$38,433.45, borrowed at 7.465% is paid off after 90 days; one can see that the Cost is about equal to the Savings—i.e., this is the practical breakeven scenario where tax payer will be indifferent assuming that there are no economic transaction

¹ There are a variety of formulae that are used to make this calculation with varying assumptions having to do with how interest is dealt with in the borrowing contract as well as a large number of assumptions regarding the nature of compounding. We are using for purposes of illustration the Excel APP: ACCRINTM as it is simple, generates relevant calibration information, and is widely available as part of the Microsoft suite, others may be relevant. For example, the exact formulation for the example is: ACCRINTM("21 April 2010", "12 July 2010", 6.89%, 39089, 3) which yields \$605.06. We will continue with this formula throughout the example.

costs². The zone to the left of the mid-point [6.89% to 7.465%] favors the borrowing option, where the Savings > Interest Costs and the zone to the right of the mid-point [7.465% to 8.04%] does not favor the borrowing option as the Interest Costs > Savings. Stage II is an experimental or “what-if” stage. Using this breakeven information, assume that the CFO believes that due to the economics of transaction costs the savings to the taxpayers must be at least twice the cost of borrowing at the breakeven point to motivate the “arbitrage” that underlies the model. Returning to the previous example, The CFO has estimated that the cost of borrowing \$38,433.45 was to be \$644.56 at the average of the interest range, 7.465%. Now if the EPS discount must be at least twice this cost of borrowing or \$1,289.12, then the EPS discount rate, as an approximation will be: 3.2979%. [$\$1,289.12/\$39,089$]. This was determined to give a savings that is about twice the borrowing cost. Continuing—assume, as before, that the tax bill is \$39,089, and if paid on or before 21 April 2010 the cost savings will be: \$1,289.12 [$\$39,089 \times 3.2979\%$]. To complete the example and to finish the demonstration, assume that Taxpayer #123 must borrow \$37,799.88 [$\$39,089 - \$1,289.12$] to pay off the GPT bill during the EPS discount period. The cost of borrowing this will be \$633.93. So the saving ratio will be 2.03 [$\$1,289.68/\633.93] or on the order of the 2:1 as desired by the CFO.

Summary This EPS discount rate is founded on the experimental “what-if” assumption that it is important to collect the GPT as soon as possible for cash management purposes. Early collection will serve to reduce the inability to collect the GPT assuming that the longer that the GPT goes unpaid, the lower the probability that it will be paid off in due course. As a final note regarding the experimental nature of Stage II, the CFO in the above example, must collect information regarding the effect of the EPS discount of 3.2979% on the total cash accrued from early payments, as well as the cash or lien-conversion for property that went delinquent from non-payment. There is no *a-priori* technique to estimate the cash impact of the arbitrage effect. It COULD happen that overall the enhanced EPS discount results in less, NOT more cash inflow because this modeling heuristic depends upon the arbitrage-debt-swap; a key factor in this heuristic is the willingness of the banks to make these arbitrage loans. In the current financial crisis that started in 2008, and which is likely to continue into the future, arbitrage-debt-swaps financed through the banks may be problematic.

Summary and Future Interesting Questions

We have suggested and given guidance level detail on five actionable areas in the SLG context that we hope will start a systemic dialogue regarding integrating control in the Public and Municipal milieus. We are keenly interested in being a part of your dialogue, and hope that if this article speaks to issues that are likely to be part of your future Management and Control Policies, Protocols or Programs that you feel comfortable in contacting us and sharing your experiences.

As for topic for *future inquiry* in the SLG context, we offer the following two:

² The reason that Cost is not exactly equal to the savings is because by definition the EPS discount reduces the amount that is needed to be borrowed so there is always a slight positive savings as the EPS discount rate is determined on the amount of the tax payable assuming that the EPS is not taken.

Long-Term Debt Issues

The SLG-entities regularly engage the Long-Term debt capital markets. Recently, *The New York Times*, See Waytt (2011), detailed the fraud committed by the Swiss regarding bid-manipulating where municipalities have secured long-term capital financing. This follows on the heels of *Bank of America* settling the same sort of fraud for 137 Million USD. Again according to *The New York Times*:

“State and local governments often sell bonds to raise money to pay for projects like roads, schools and hospitals. Until they are ready to spend the money, the entities invest the proceeds in contracts that are often tailored to meet specific needs in terms of the timing of spending and required collateral to insure their debts. Investment firms offer to sell those contracts at given prices, and bidding for the right to provide the service is supposed to be conducted at arm’s length. But UBS often conspired with the party overseeing the bidding to guarantee that it bid just enough to win the contract, thereby maximizing its own profit.”

An interesting and certainly timely research report detailing the *UBS* and *Bank of America* Bid-Rigging frauds and the possible impact that such a practice would have on the SLG-entity and Pro-Active actions that can be taken by the SLG and the agencies charged with the ethical functioning of these secondary/derivative contract markets may help to provide significant guidance to the SLG in these areas.

Outsourcing

Outsourcing, to avoid lawsuits and economize on the use of SLG resources, is common in many For-Profit as well as SLG-entities. See Prager (2008) and Audi (2010). In addition, to outsourcing there are often many other ways to configure the SLG resource delivery system. Licensing, Franchising Enterprise “boutiques” or keeping the service delivery “In-House” as part of the SLG Bureau system are all found in the SLG milieu. Given these resources configuration possibilities we suggest that a rich discussion of the SLG-decision making variables and how to collect and process such information so as to answer the question; For the SLG CFO, how does one deciding among: Licensing, Franchising, Outsourcing, Creating Enterprise Boutiques, or forming a SLG-entity Bureau to deliver the required services?

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