

**TFF Allocation:  
Feasibility of Identified Options**



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# TFF Allocation

## Feasibility of Identified Options

### Purpose of Paper

This paper is a follow up to the May 2005 report “Territorial Formula Financing: Reform Options.” The May report described a number of alternative procedures for allocating TFF grants starting in April 2006. Subsequent discussion identified two of these, the “Update” and “Actuals” options, for further study.

This follow-up paper will,

- describe a particular variant of each of these options,
- evaluate data and computational requirements for implementing them, and
- outline next steps to be taken if these options are to be pursued further.

This information should help the Panel in formulating its recommendations as to the method of allocating TFF grants starting in April 2006.

### Description of Options

“Territorial Formula Financing: Reform Options” identified six alternative allocation procedures. The two explored further here were described as follows:

#### ***Update Original TFF System***

*Under this option, the structure of the original TFF system (Gross Expenditure Base (GEB), Eligible Revenues, gap filling grant) would be retained. However, the basic components would be updated.*

- *The GEB would be based on the actual spending of each territory in some year more recent than 1982, ideally the most recent year for which territorial public accounts are available.*
- *The benchmark year for assessing potential revenues would be advanced from 1992-93 to the most recent year for which the necessary data are available.*

*In subsequent years, the GEB and Eligible Revenues would be updated using the original TFF system procedures, i.e. the GEB escalator would remain growth in provincial and local expenditures (P/L) adjusted for population change, territorial potential revenues would be “kept up” with the growth in provincial revenues.*

*Looking further ahead, benchmarks for GEB and potential revenues would be updated more frequently than in the past – perhaps every five years.*

### ***Actual Expenditures and Revenues***

*...compute the gap between each territory's actual expenditures and actual revenues (apart from its TFF grant) in some recent past year. No adjustments would be made to these actual figures (e.g. no EDI reduction from revenue). Each territory's gap would be expressed as a percentage of the three-territory sum of these financial gaps. These percentages would then be applied to the predetermined TFF grant total for the year in question.*

*The year of reference for the actual expenditures and revenues should be the most recent one possible for which good data are available, perhaps two years prior to the year for which the grant is being computed*

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The options as developed here essentially follow these descriptions, with slight changes as recommended in response to the May paper.

### **Implementing the "Update" Option**

The methods used for updating the expenditure side of the TFF formula are described first, then those for the revenue side.

#### ***Expenditure Side***

When the TFF formula first began operation in 1985, its initial GEB was set at a particular dollar value for each of the then two territories. Since that time, there has been little explicit reference back to territorial expenditure need or actual outlays.<sup>1</sup> By and large, the starting value of the GEB has been escalated based on a proxy for the growth in territorial government's expenditure requirements. GEB growth was geared to the increase in provincial and local government spending and, after 1990, to population growth in the territory relative to that of Canada.

Despite the Gross Expenditure Base's name, its 1985 starting value of the was calibrated to territorial revenues<sup>2</sup>. The formula's creators used revenues rather than expenditures because revenue figures (i.e. federal grants) were readily

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<sup>1</sup> The formula made some references to actual expenditures after 1985. When the GEB was adjusted periodically to reflect program transfers, actual expenditures for the programs being transferred were used to compute the size of the adjustment. When Nunavut was created, actual expenditures in the eastern and western parts of the Northwest Territories were examined in order to split its GEB.

<sup>2</sup> Revenues from 1982-83, escalated to 1985 values, were used to set the GEB. 1982-83 was chosen as the base year so that data from a "closed year" could be used, thereby avoiding the need to revise the benchmark GEB value subsequently.

available from territorial books. Quantitatively, the use of revenues to set the starting GEB value for each territory created little or no distortion because a territory's expenditures prior to the TFF always closely matched its revenues. In fact, the grants that territories received in the pre-TFF era were based on their federally-approved spending.

In updating the GEB for 2006, there is no reason to approximate expenditures by looking at revenues as was done in 1985. It is more conceptual appropriate and quantitatively accurate to key the GEB directly to a territorial expenditures.

A number of data and conceptual issues need to be examined before a specific dollar value for expenditures is selected. Some of the issues to be tackled in this examination are described later on in this paper (Data and Methods Issues section), after both TFF allocation options have been discussed. The following table give a rough impression of the likely results of this expenditure updating exercise.

<b>Updating the Gross Expenditure Base to 2003-04</b>			
	Total Expenditures	Total Expenditures	GEB
	Territorial Public Accounts	Statcan Financial Management System (Territorial + Local)	Pre- New Framework TFF
	(millions of dollars)		
Nunavut	888	1,132	764
NWT	971	1,264	774
Yukon	606	692	512

Even on the basis of these rough numbers, it is worth noting that,

- Expenditure estimates can be updated from different sources, such as the territory's own Public Accounts (second column) and Statistics Canada's Financial Management System (third column). The selection of a source for updating and the adjustments required are discussed later. At this stage it is sufficient to observe that different sources produce significantly different results.
- The updated GEB will be larger than the existing one, regardless of the source used for updating and regardless of which territory is considered. Part of this can be explained by explicit adjustments made to the "old" GEB, such as the EDI exclusion. Part of it is definitional, as the original

GEB was defined to exclude certain expenditures<sup>3</sup>. Part of it is due to divergence over the years between the escalator-driven growth in the GEB and the actual growth in territorial expenditures.

- The magnitude of the change from the “old” to the updated GEB is not proportional across territories. The Northwest Territories’ GEB would see a particularly large GEB expansion as a result of updating.

It is important to mention that a larger GEB does not necessarily imply a larger TFF grant. Updating will also apply to the revenue side of the formula and this too will affect grants. Moreover, the size of the total grant pool is independent of the results of the formula. Since the New Framework changes introduced in October 2004, the formula determines only the portion of the predetermined grant pool that goes to each territory, not the absolute amount each will receive.

### **Revenue Side**

When it comes to the revenue side of the formula, introducing the “Update” option may provide a convenient opportunity to re-examine some of the exclusions and adjustments that were made in the original formula (e.g. recoveries) or introduced later (e.g. tax effort adjustment factor, economic development incentive).

Without prejudging the outcome of such a re-examination, it is contemplated here that updating would affect only those own-source revenues and recoveries that are measured in a hypothetical fashion in the “old” formula, i.e. those that are subject to tax effort adjustment. Other revenue categories would continue to be entered in the formula at their actual values. This latter group includes,

- certain revenues associated with programs that have been transferred to the territories since 1985,
- own-source revenues and recoveries that were specifically identified in the TFF agreements to enter the formula at their actual values, and
- federal transfers other than the TFF grants (though portions of these may still be excluded).

Together these “actual value” components make up 15 to 30 per cent of formula revenues, depending on the territory.

In terms of measuring hypothetical revenues, two slightly different approaches could be taken in the updated formula.

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<sup>3</sup> More accurately, the original GEB excluded some territorial *revenues*. The original GEB was calculated by taking total territorial grants from the federal government and subtracting the money that territories received for certain specified purposes (e.g. for delivering federal programs) and the money that was generated in certain specified ways (e.g. investment income). It will be necessary to consider whether similar adjustments are required in setting the GEB for 2006.

- Strict updating -- the updated formula would calculate the amount of revenue that would be collected by each territory if it applied national average tax rates to each of its tax bases in a base year such as 2003-04. This amount would be adjusted to allow for a lower tax effort assumed feasible in the territories<sup>4</sup> -- the “old” formula’s Catch-Up Factor computed for 2003-04 rather than 1992-93. In subsequent years hypothetical revenues would be computed assuming that territories changed their tax effort in line with provinces (the Keep-Up Factor).
- Equalization approach – the updated formula would calculate the amount of revenue that would be collected by each territory if it applied a given percentage (e.g. 85) of national average tax rates to each of its tax bases in each year. Territorial tax rates in 2003-04, and in other years, would be irrelevant for formula purposes.

The two approaches should produce quite similar results. The former was used in the “old” formula because it was felt that it would be difficult to measure territorial tax bases each year. However, territorial data availability has improved<sup>5</sup>. Generally speaking, if the data required to carry out the calculation are available for provinces, they are now available for territories as well. Officials involved in administering the equalization program feel that it is now feasible to measure territorial tax bases each year. Where this is not the case, either the required territorial data can be collected or some proxy can be used that does not distort the impression of territorial revenue-raising capacity too severely.

With that territorial tax base information in hand, it will be possible to conduct an annual assessment of territorial potential revenue at national average tax rates, just as is done for provinces for equalization purposes<sup>6</sup>. Given that this calculation can be performed, the equalization approach is preferred because it is more direct, transparent, and accurate. There would no longer be a Catch-Up Factor and a Keep-Up Factor in the formula, just a measure of the revenues each territory could raise if it applied a percentage of national average tax rates to its tax bases each year.

Of course, the estimate of territorial revenue potential obtained by either of these approaches won’t be perfect. Perfection is not however the appropriate criterion for judging whether an updating of the 1992-93 based method and possible adoption of an equalization-like procedure is justified. Remember that the 1992-93 based estimate was itself imperfect at the time it was made due to data constraints. It has since been extrapolated year by year for more than a decade

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<sup>4</sup> The 85 per cent figure used in the pre-New Framework version of the formula might be re-examined, although a change in the assumed tax effort of the territories would be a more dramatic change than the label “Update” option suggests.

<sup>5</sup> For example, Statistics Canada has undertaken a Project to Improve Provincial Economic Statistics (PIPES) that has had important benefits for users of territorial data.

<sup>6</sup> Hence the name “equalization approach”.

by an imperfect escalator (the Keep Up Factor). Not only are 2003-04 data more relevant to today's situation than those of 1992-93, but the availability and accuracy of territorial data has improved in the interim.

It is almost inevitable that a more recent impression of territorial revenue potential will tell a different story than the snapshot based on 1992-93. The absolute and relative positions of the three territories in term of potential revenue per capita will have changed. With a fixed pot of grant money, such changes in relative positions will, in all likelihood, translate into larger transfers for some territory(ies) and smaller ones for others.

As part of the 2004 TFF renewal exercise, Finance Canada assessed potential territorial revenues at national average tax rates for 1999-00 and 2000-01. This work is informative in two respects.

- First, it illustrates that it is feasible to carry out such 'strict updating' or "equalization approach" estimates of territorial fiscal capacity. Concerns that it can't be done because of data or methodological constraints should be allayed. Attention should instead be focussed on areas where the quality of the estimates can be improved.
- Second, it gives an impression for more recent years as to which territories are extending a "reasonable" tax effort (85 per cent of national average tax rates) and which are not. This can be compared with the flawed assessment of tax effort obtained from the 1992-93 based approach. This gives an idea of how each territory would be affected by adopting the revenue side of "Update" option. The table below reproduces Finance Canada's findings.

<b>Territorial Revenues -- Actual and Potential</b>				
	1999-00		2000-01	
	Actual	Potential @ 85% cent of national average tax rates	Actual	Potential @ 85% of national average tax rates
	(millions of dollars)			
Nunavut	113	108	111	99
NWT	244	315	528	613
	(NWT unusually high in 2000-01 due to a Corporate Income Tax "blip")			
Yukon	114	160	110	163

- Nunavut actual tax effort produces revenues (\$113 million in 1999-00) that are very close to potential, 85 per cent of the national average tax effort, revenues (\$108 million in 1999-00).  
The same conclusion was reached from comparing Nunavut's actual revenues to its potential revenues under the "old" 1992-93 based calculations.
- Northwest Territories' tax effort is substantially below the 85 per cent standard (\$244 million actual revenues in 1999-00 versus \$315 million potential).

By contrast, under the “old” calculations, NWT was judged to be taxing at about 85 per cent of national average rates.

This suggests that the “old” formula was overestimating NWT’s tax effort.

- Yukon’s tax effort falls well short of the 85 per cent mark (\$114 million actual revenues in 1999-00 versus \$160 million potential).

This discrepancy was evident under the “old” calculations as well, though updating increases the actual versus potential revenues gap somewhat.

This suggests that the “old” formula was overestimating Yukon’s tax effort, but to a lesser degree than in the case of NWT.

- Relatively speaking, updating the potential revenue calculations in TFF will work to the financial advantage of Nunavut and to the detriment of Yukon and particularly Northwest Territories.

## Implementing the “Actuals” Option

The May paper admitted a problem implicit in using the territory’s actual expenditures and revenues to calculate its TFF grant -- that of creating inappropriate incentives.

*In computing the GEB and Eligible Revenues, the original TFF system avoided using the actual amounts that territorial governments choose to spend or to raise. There are good reasons for this. If the TFF grant was based on actual expenditures and revenues, and automatically filled whatever gap a territory chose to budget for, an important fiscal restraint would be lifted. The territory could spend more or tax less and suffer no financial consequences. It would not be obliged to impose any taxes at all. This would remove an important discipline on its spending*

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This caution was tempered by a invoking some of the difficulties encountered in using hypothetical rather than actual measures in the TFF grant formula.

*However necessary it may be to measure hypothetical, rather than actual, expenditures and revenues, it greatly complicates the administration of the TFF. Furthermore, as the Assessment of the Current TFF Allocation System section of this paper argues, the formula’s real world approximations of the hypothetical concepts of expenditure need and potential revenue leave much to be desired.*

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With this conflicting advice in mind, the “Actuals” option was modified to try to balance the objectives of proper incentives, accuracy and simplicity. This revised option might better be named “Actual Revenues (and GEB Expenditures).”

## ***Expenditure Side***

Under this modified “Actuals” option, the expenditure side of the formula would be based on an (updated) GEB calculation rather than on actual territorial expenditures. This modification was introduced for two reasons.

- The main motivation for the “Actuals” option was simplification. The expenditure side of the TFF formula is markedly less complex than the revenue side. The simplification goal can be satisfied to a great extent by adopting an “Actuals” approach on the revenue side only.
- Preservation of the GEB procedure avoids, at least on that side of the TFF formula, the undesirable incentive effects mentioned above. Maintaining proper incentives is particularly important with respect to expenditures, since they have the dominant quantitative influence on the determination of the grant. By removing actual expenditures from the grant-determination process territorial governments will not receive larger grants simply because they increase their actual expenditures.

The GEB used in the “Actuals” option would be the same as that described in the previous “Update” option section of this paper. That presentation and analysis need not be reiterated here.

## ***Revenue Side***

As with the expenditure figures discussed under the “Update” options, revenue data are available from various sources, in particular the territorial Public Accounts and Statistics Canada’s Financial Management System (FMS). Public Accounts and FMS data differ in terms of coverage and accounting conventions. Both of these revenue concepts differ substantially from the TFF’s Eligible Revenues, the proxy for measuring revenue currently used in the formula.

Whichever source is used for obtaining actual revenues under this option, adjustments would likely have to be made. For example,

- revenues collected as contributions to government employee pension plans, do not fit within the concept of fiscal capacity needed for computing the grant.
- investment income has largely been excluded from Eligible Revenue under the existing TFF formula and, for similar reasons, might well have to be removed from the actual revenue figures under this option as well.
- revenue from sale of goods and services, such as rental of government owned housing, may need to be netted out from actual revenues and the GEB, leaving only net expenditures in the formula calculations i.e. the government subsidy element of outlays on housing.

More generally, a careful study of the actual revenues would be required to determine exactly which of them to include in the formula.

Even without these adjustments, it is interesting to compare actual revenues from FMS and Public Accounts with Eligible Revenues used to compute TFF grants under the “old” formula. This is done for the year 2003-04 in the table below.

<b>Comparing Actual Revenues and TFF “Eligible Revenues” 2003-04</b>			
<ul style="list-style-type: none"> <li>• “Eligible Revenues” reflect the EDI reduction and other formula-determined exclusions.</li> <li>• “Eligible Revenues” include territorial own-source revenues (adjusted for tax effort where appropriate) and federal transfers other than the TFF grant (adjusted).</li> <li>• Actual Revenues here also exclude the TFF grant to make a relevant comparison.</li> </ul>			
	Actual Own-Source Revenues	Actual Own-Source Revenues	Eligible Revenues
	Territorial Public Accounts	Statcan Financial Management System (Territorial + Local)	Pre-New Framework TFF
(millions of dollars)			
Nunavut	152	364	71
NWT	40	246	148
(NWT unusually low in 2003-04 due to Corporate Income Tax repayment)			
Yukon	204	264	77

Even on the basis of these initial estimates, it is worth noting that,

- Actual revenue estimates can be drawn from different sources, such as the territory’s own Public Accounts (second column) and Statistics Canada’s FMS (third column). For reasons to be discussed later, FMS is the preferred source. But since the alternate sources produce significantly different results, it is important to understand the reasons for discrepancies and, based on this analysis, to adjust the FMS figures where required.
- The FMS actual revenues (third column) are larger than the existing TFF formula’s Eligible Revenues (fourth column), regardless of which territory is considered. Part of this can be explained by explicit modifications made to Eligible Revenues, such as the EDI exclusion and tax effort adjustment. Part of it is definitional, since the TFF agreements stipulate that certain revenue sources are to be excluded.
- The change in revenues from adopting the “Actuals” option is not proportional across territories. Nunavut’s revenues would see a particularly large expansion. In 2003-04 for example, Nunavut’s actual Public Accounts’ revenues (\$152 million) are more than double its Eligible Revenues (\$71 million), and its actual FMS revenues (\$364 million) are more than five times as large. These anomalies require investigation.

It is important to mention that larger revenues do not necessarily imply a smaller TFF grant. The numbers on the expenditure side of the formula will also change, affecting grants. Moreover, the size of the total grant pool is independent of the formula. Since the New Framework changes introduced in October 2004, the formula determines only the portion of the predetermined grant pool that goes to each territory, not the absolute amount each will receive.

## **Data and Methods Issues**

The methods for updating the GEB and Eligible Revenues under the “Update” option and for selecting or adjusting revenue data under the “Actuals” option have been described in general terms, but a number of practical questions must be addressed before they can be applied. This section of the paper discusses some of them.

### ***Data Source: Public Accounts or Financial Management System?***

#### **Gross Expenditure Base**

Territories publish “final” reports on their financial positions, including their expenditures, in their Public Accounts. The Public Accounts are comprehensive, approved by territorial governments and authenticated by the Auditor-General of Canada. These are desirable properties for data to be used in the grant formula. However, each territorial government uses its own accounting conventions that in some cases differ from those of the other territories. It is important for purposes of making a fair allocation of TFF grants that the expenditures, as measured in the formula, mean the same thing in all three jurisdictions.

Statistics Canada reconciles government accounts (federal, provincial and territorial, local, quasi-government bodies) to put them all on a consistent basis in its Financial Management System (FMS) of financial reports. Using FMS rather than Public Accounts data in the TFF formula would help to ensure a level playing field.

Territorial government may have adopted accounting conventions that differ from the FMS standard for good reasons. They consequently may be more comfortable with grant calculation based on their Public Accounts version of their expenditures. The reasons for divergences between FMS and Public Accounts figures should therefore be explored so that issue of data source may be decided on an objective and fully-informed basis. Statistics Canada publishes a table reconciling Public Accounts and FMS figures that will be a useful tool in carrying out this exploration.

## Potential Revenues

Where actual revenues are to be used, data can be drawn from Public Accounts or FMS. The case just made for using FMS data, with suitable adjustments, for expenditures pertains equally to revenues.

Where a hypothetical calculation is required (revenue at national average tax rates adjusted for tax effort), data on territorial tax bases and national average tax rates are required. The 33 tax bases (“revenue sources”) used in equalization are defined in the regulations for that program <http://laws.justice.gc.ca/en/f-8/sor-2000-100/108509.html> where the data sources are also identified. Annex 1 lists those tax bases and the type and source of information used for each in the equalization program.

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Choosing the proper source for the formula data is of course important. Regardless of the source, a number of other questions of proper treatment arise

- what expenditures and revenues to exclude from the formula,
- how to treat expenditures for which funding is recovered from other governments,
- appropriate consolidation of territorial government, “near government” and local government accounts,
- assigning revenues and expenditures to the proper year, and
- the lag between the year of the expenditure and revenue data and the grant year.

## ***Exclusions***

Some territorial government revenues do not come from the taxpayer. For example, government employee pension plans are funded to a large extent by those employees’ contributions and it is those same employees who, when they retire, get those contributions back. Workers compensation funds are similarly restricted in terms of who pays into them and who benefits

These earmarked revenues should not be included in the formula’s Eligible Revenues aggregate, which is designed to gauge the potential revenue available to finance public services. On the expenditure side, only the government’s contribution as employer to its employee pension fund should be included in the GEB. Similarly, only government subsidies to workers compensation funds, if any, should show up in the GEB.

## ***Recoveries***

Territories report expenditures they make on programs they are delivering on behalf of other governments. For example, territorial governments provide certain medical services to First Nations people on behalf of Health Canada. Territorial accounts also list as revenues the amounts they recover from these other governments to defray the cost of delivering those programs, such as the recoveries from Health Canada in connection with the Indian and Inuit Health program. Generally speaking, the expenditures made under these arrangements are exactly offset by the associated revenue recoveries.

These recoverable expenditures should be treated consistently on the two sides of the formula – either included as both expenditures and revenues, or excluded from both.

## ***Consolidated vs. non-consolidated accounts***

Similarly to provinces, territorial governments carry out their activities through departments and also through various related bodies such as boards, agencies, commissions etc.

Departments are completely “on budget”, reporting all their outlays as government expenditures and all their inflows as government revenues.

The related bodies may be partially self-financing, through fees they charge for example. Some may receive grants or subsidies from the government. Others may remit some or all of the surplus they generate to the government.

On the government’s books, the accounts of related bodies may either be consolidated with those of government proper, or treated separately. In the latter case, only the money that passes between the related body and the government proper appears on the government books.<sup>7</sup> This raises the question of whether the expenditure (and revenue) measures used in the TFF formula should be on a consolidated basis or not. Equalization provides a guide. Generally speaking, if the related body is providing public services, its financial transactions are consolidated with those of the government proper for equalization purposes.

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<sup>7</sup> Take a government-owned housing corporation as an example. The corporation charges rents to tenants and spends to acquire and maintain properties. If it makes a profit, it remits some or all of the proceeds to the government. If it loses money, it receives a subsidy from the government. Consolidated accounting adds all the rental receipts to the government’s revenues and all the spending on the dwellings to the government’s expenditures. The remitted profits or subsidies are ignored, since they are all intra-government payments. Non-consolidated accounting treats the housing corporation as a separate entity. Only remitted profits or subsidies show up on the government books, as revenue and expenditure respectively.

Even within government proper consolidation questions arise. One department may provide services to another and thereby generate an intra-governmental financial transaction. This should not be considered as an expenditure for formula purposes. It is the final provision of services to the public that is relevant.

### ***Local Governments***

Another consolidation issue has to do with expenditures by local governments. Using the equalization program as a point of reference, the activities of local governments are consolidated with those of the provinces. This is done to ensure consistent treatment, since the functions that are carried out by local governments in one province are the responsibilities of the provincial government in another. This principle should be carried over to the TFF formula.

In fact, the role of local governments is quite restricted in the territories. Apart from the three territorial capitals, municipalities and local school boards are relatively rare and have limited revenue potential. But the fact that local governments do exist to some extent, and that territorial governments fill the local government role where they don't exist, affirms the need for consolidation.

An advantage of FMS data is that a consolidated territorial-local set of accounts is available. Territorial Public Accounts on the other hand do not as a rule consolidate the activities of local governments.

### ***Timing***

Expenditures undertaken at a particular point in time, may have an impact for many years to come. It is important in measuring expenditures for TFF formula purposes to treat outlays with long-lived effects properly, or at least consistently.

One example is capital spending. A territorial government may spend a large amount of money this year to acquire an asset that will provide services for many years to come. Accrual accounting, which spreads out the recognition of such spending over the life of the asset, addresses this issue.

Government funding of pension plans is another item where financial statements should take timing issues into account. Some public employee pension plans run on a pay-as-you-go basis. They report expenditures simply as the amount of pension benefits paid to retired employees during the year and revenues as the contributions received during the year. Other plans record as expenditures the amounts that should be set aside this year in recognition of the future pension liabilities to be shouldered by the plan that have built up over the year and as revenues the amount the employer and employees should have contributed as a result of the year's service. If the territories differ in their accounting treatment of

pension plans, some attempt at standardization is required to provide equivalent treatment in computing revenues and expenditures for formula purposes.

There are also timing issues with respect to amounts received in advance or arrears. Taxes are sometimes paid after the year in which they are due. Territories report as one of their revenue items “recoveries of prior year’s expenditures”. Adjustments may be required for these items to ensure that outlays and expenditures are attributed to the year to which apply.

Territorial governments apply accrual accounting to some extent, but practices are evolving in this area. The treatment of items such capital spending, pension plans and so on should be examined closely to ensure that, in calculating the grant, treatment is consistent. It is important to make the TFF formula coherent with current, if not with model, government practices.

### ***Year/lag***

Which year’s information should be used either to update the GEB and Eligible Revenue measure (“Update” option) or as the source of actual revenue data (“Actuals” option) for a particular year’s grant? The object of the updating exercise is to select a more current year than was used in the “old” TFF and that will presumably better reflect the contemporaneous expenditure needs and revenue potential of territorial governments. This would suggest choosing the most recent year for which reliable and reasonably final data are available. It appears that for the 2006-07 TFF grants, the year 2003-04 would serve that purpose. The most important reason why a more recent year cannot be adopted is the substantial revisions affecting estimate of potential personal and business income tax revenues in particular due to late returns received for several years after the tax year in question.

On the subject of business income tax, much territorial revenue from this source comes from resource companies with erratic patterns of earnings from year to year and consequently widely fluctuating tax liabilities. This suggests that a single year may give a misleading impression of a territory’s revenue potential and that perhaps an average of several years should be used.

In terms of the “Actuals” option, the now-familiar incentive problem emerges once again. Recall that a recipient government will have no financial incentive to extend a strenuous revenue-raising effort if its grant automatically goes up by whatever amount its actual revenues go down.

In order to avoid the worst of this incentive problem, it is proposed to use revenue data from a few years prior to the year for which the grant is being computed. By doing so, the formula will ensure that a territorial administration that cuts its taxes will feel the tax revenue loss immediately, but will not enjoy the resulting grant increase for a few years. In the meantime, it will have to reduce

its spending or suffer a budgetary shortfall that it must cover by borrowing. Using lagged revenue figures, which are less subject to revision, also means that grant estimates and payments are more stable and predictable.

This lagged revenue estimate can be adjusted to a current-year basis using an escalator derived from something other than the territory's own collections, perhaps a revenue analogy to the population adjusted provincial-local expenditure factor.

## **Conclusion and Next Steps**

This paper has concluded that

- Both the “Update” and the “Actuals” options are feasible allocation procedures for TFF grants for 2006-07 and beyond. Data exist for implementing either one.
- Considerable work remains to be done however, including
  - defining precisely the FMS expenditure items to be included in the updated GEB and the adjustments required,
  - verifying and fine tuning the potential revenue estimates obtained by applying national average tax rates to territorial tax bases, and
  - determining the actual revenue components to be drawn from the FMS and the adjustments required.

None of these tasks is conceptually insurmountable or operationally infeasible, but each of them will give rise to controversy. Large amounts of money are at stake and many of the issues leave room for reasonable people to differ. In the face of these differences, it is important to recall that what's being sought here is a better TFF, not a perfect one. The “old” formula itself was far from perfect, so a retreat to “old” measurement techniques do not promise a safe refuge. The “old” formula used proxy measures to represent expenditure needs and potential revenues. The framers of the “old” formula encountered strong criticisms of imperfect proxies, but in the end, the “old” formula didn't have to be perfect, just better than what had gone before. The creators of the new, reformed TFF face a similar challenge – finding a way of doing things better without being stymied by the fact that perfection is beyond reach.

In meeting this challenge, it should be recognized that territorial positions on the desirability of updating and/or simplifying the formula's expenditure and revenue measures and on the acceptability of the precise techniques chosen to effect the changes will almost certainly be influenced, if not driven, by their own anticipated financial results.

Positions on formula design that are aligned with financial self-interest should be regarded with suspicion. Even though such stances are understandable and to

be expected, it would be a shame to allow arguments based on them to block changes that improve the grant determination process. Updating the measurement of expenditure need and potential revenue will result in TFF grants that are fairer and more responsive than under the “old” TFF system that used an outdated and inaccurate measure.

Wherever possible, formula design choices should be guided by the principles underlying the TFF rather than on who wins and who loses. The most basic of these principles is that the grant treat the territories comparably when it comes to providing them with the means to offer public services and that it treat fairly territories’ ability to finance themselves. In addition, the process used for grant determination should provide proper incentives and should be reasonably predictable and stable. These principles may seem abstract at times, but will prove more dependable in resolving disputes than reference to who gets how much.

Realistically, if an improvement in revenue measurement in the formula is desired, it may be necessary to compensate “losers” through a protection clause (“no territory’s grant can decline by more than x per cent) or a transition mechanism (“territorial grants are calculated on the basis of a weighted average of the old and new revenue measures that gradually phases out the old”).)

Even though it is virtually inevitable that there will be financial losers arising from any change to the way formula measures expenditures and revenues in today’s “fixed pot world”, now may nevertheless be the most propitious time to act.

Just as a fixed pot increases the probability of losers from any formula change, it also essentially guarantees that there will be one winner or more. Under a “bottom up” calculation of grants (i.e. one without a fixed pot) it is possible that all territories would lose money from a change in revenue measurement. In such a world, the chances of building a coalition for change would be slim.

At least in the fixed pot world, there will be one territory or more benefiting from a change that is correct in terms of good transfer payment principles, and therefore backing such change. Seekers of a better TFF should take advantage of such support, even if it is based on financial self interest.

## Annex 1: Tax Bases for Measuring Potential Revenue at National Average Tax Rates

### Equalization (Representative Tax System) Measurement of Revenue Bases

	<u>Revenue Base</u>	<u>Data Required</u>	<u>Territorial Revenues (source: 2005 Budgets)</u>		
			(thosands of dollars)		
			Nunavut (2003-04)	NWT (2003-4)	Yukon (2003-04)
		<i>Note: often the indicator is province divided by sum-of-provinces. This sum would have to be adjusted to include territories</i>			
1	Personal Income Tax	Tax returns. Micro simulation model	12,447	51,569	34,480
2	Business Income Tax	Statcan, corporate profits & Finance corporate taxable income by territory, profits by Government Business Enterprises (FMS)	16,457	-224,537	6,408
3	Capital	Statcan (Industrial Organization and Finance Division), taxable paid-up capital employed & provincially guaranteed debt of electrical utilities (Public Accounts)			
4	Sales	Provincial input-output tables.			
5	Tobacco	Based on Statcan data	8,348	15,242	6,177
6	Gasoline	Statcan, Gasoline and Other Petroleum Fuels Sold + Quarterly Report on Energy Supply-Demand	3,465	17,271	3,908
7	Diesel	Statcan, Gasoline and Other Petroleum Fuels Sold + Quarterly Report on Energy Supply-Demand			2,511
8	Car Licences	Statcan, Road Motor Vehicles, Registrations or by the Minister if Statistics Canada does not make the determination			
9	Truck Licences	Statcan New Motor Vehicle Sales + Industry Price Indexes			

	<u>Revenue Base</u>	<u>Data Required</u>	<u>Territorial Revenues (source: 2005 Budgets)</u>		
10	Alcoholic Beverages	Revenue as determined by the Minister based on information provided by the provinces and Statistics Canada + volume as determined by Statistics Canada The Control and Sale of Alcoholic Beverages in Canada	2,494	20,028	8,260
11	Hospital Insurance	Microsimulation model, number of families as identified by tax returns			
12	Forestry	Value & volume of production of logging determined by Canadian Forest Service for Compendium of Canadian Forestry Statistics			
13	Conventional New Oil	As determined by minister			
14	Conventional Old Oil	Statcan Oil and Gas Extraction minus #13, #15, #16, #17, #18			
15	Heavy Oil	As determined by minister			
16	Mined Oil	Statcan, Oil and Gas Extraction			
17	Light & Medium Third Tier Oil	As determined by minister			
18	Heavy Third Tier Oil	As determined by minister minus #17			
19	Natural Gas	Statcan, Oil and Gas Extraction			
20	Crown Leases	Revenues from #13-#19 or actual revenues from sale of crown leases (cumulative)			
21	Other Oil and Gas	Statcan, Oil and Gas Extraction volume of oil etc, volume of gas			
22	Mining	Statcan, fixed capital flows and stocks data used for Provincial Economic Accounts, profits of industry on the basis of data from Statcan's Interprovincial Input-Output Accounts			317
23	Water Power Rentals	Statcan, Electric Power Generation, Transmission and Distribution			
24	Insurance Premiums	Office of Superintendent of Financial Institutions, information on premiums and dividends to policy holders	617	2,880	1,340

	<u>Revenue Base</u>	<u>Data Required</u>	<u>Territorial Revenues (source: 2005 Budgets)</u>		
25	Payroll	Statcan, National Income and Expenditure Accounts, Wages Salaries and Supplementary Labour income and Employment, Payrolls and Hours	6,001	13,766	
26	Property	Statcan, Provincial Economic Accounts Personal Disposable Income minus indirect taxes & "urban scale factor" & population and residential net capital stock & GDP minus some industries & non-residential net capital stock & value of farm land & value of farm net capital stock	2,671	10,092	2,384
27	Race Tracks	Canadian Pari-mutuel Agency (Agriculture Canada)			
28	Lottery	Statcan, Net revenue after prize payouts + Personal Disposable Income + population			
29	Other Games of Chance	Statcan, Net revenue after prize payouts + Personal Disposable Income + population			
30	Miscellaneous	Share of non-resource revenue sources above	34,164	24,454	6,033
31-33	Shared	N.A. for territories at present			