



TESTIMONY BEFORE THE SPENDING CAP COMMISSION

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Introduction

Chairman William Cibes, Chairwoman Patricia Widlitz and all the members of the commission, thank you for the opportunity to speak to you today regarding the state's spending cap. While you wrestle with the challenging task of defining personal income, inflation and determining the appropriate scope of capped expenditures, I am hopeful the commission will not only consider how to ensure that state government spending does not outpace what we can afford, but also contemplate how the spending cap can be used to bring budget stability to Connecticut.

There are measures – which I will demonstrate today – to stabilize the state spending cap. This proposed new approach to our state spending cap has the potential to ensure that our budgets are more stable and predictable – and will alleviate the need for future crisis-driven tax increases, service cuts or layoffs during economic recessions. It would also allow us to build up greater reserves – establishing a robust recessionary seawall – and pay off state debt and liabilities at a greater pace.

For the sake of state residents and businesses, budget stability and predictability must be the focus of any conversation about Connecticut fiscal policy.

Over the last several years I have promoted various measures to encourage budget stability in our state. Most recently my office, in conjunction with Senator Fonfara, promoted new Budget Reserve Fund (BRF) deposit rules to reduce the state's General Fund revenue volatility by diverting windfalls from the General Fund's most volatile revenue sources into the BRF. These rules are designed to restrain spending during good economic times by diverting revenues that would otherwise have encouraged increased expenditures and, instead, puts more money aside to provide the funding needed to maintain government services during economic downturns. The BRF deposit rules target revenue, but the policy considerations are very similar to those the Commission faces in defining the expenditure cap.

A key consideration for both policies is their effect on reducing volatility in state budget expenditures over time. Lowering volatility requires adjusting the distribution of state spending over the business cycle; limiting expenditure growth during economic expansion and using the savings to build reserves that allow for increased spending during recession and recovery periods. The new BRF deposit rules and a well-designed spending cap are complimentary tools that, if adopted and adhered to, can help to reduce annual volatility in state expenditures by placing limits on expenditure growth during the peaks of economic expansion, building the Budget Reserve Fund and allowing the flexibility to spend those reserves during economic recessions and recoveries. Combined, the BRF deposit rules and the spending cap can help to bring greater stability and predictability to state government spending; reducing the peaks and valleys that lead to perpetual budget crisis, tax increases and service cuts.



Interdependence of the BRF deposit rules and the spending cap

Historically, the state's statutory spending cap has not been adhered to when revenues are available to exceed the cap, indicating that state expenditure growth has been driven primarily by the availability or scarcity of revenue – rather than by disciplined financial planning.¹ Too often spending levels during the peak of economic expansion have exceeded levels that are sustainable long-term; leading to budgetary cuts and crisis-driven tax increases when the economy inevitably turns south.

New BRF deposit rules that go into effect in 2020 seek to avoid similar outcomes in the future by diverting revenues from the state's two most volatile major revenue sources -- estimated and final payments and the corporations tax -- to the BRF when they exceed historic norms.

Diverting windfall revenues into the BRF will both tamp down on expenditure growth during the peak of economic expansions and build larger reserves in the BRF to help weather future recessions with fewer cuts in state services and tax increases.

The BRF deposit rules are necessary to improving budget stability in Connecticut, but are not sufficient. The BRF deposit rules only target the state's two most volatile significant revenue sources; it does not target other major sources of revenue like the withholding portion of the income tax or the sales tax. Thus, even if the BRF deposit rules are followed, a well-designed spending cap is necessary to manage expenditure volatility that results from the over performance of other major revenue categories that are not targeted by the new BRF deposit rules.

Lessons learned in developing the BRF deposit rules

The BRF deposit rules calculate an annual threshold for the combined total of estimated and final and corporations tax collections. Revenue in excess of the calculated threshold is designated for deposit into the BRF. The threshold lowers the annual volatility of available General Fund revenue from the targeted sources by triggering deposits into the BRF when revenues are above average long-run performance, while not requiring deposits when revenues are recovering following an economic downturn and still below average long-run performance. In order for the deposit rules to achieve the goal of reducing General Fund revenue volatility, the deposit threshold needed to be defined to reflect the long-term average performance of the targeted revenue streams.

Developing a workable deposit threshold calculation required some trial and error. Using the historic average revenue performance of the two revenue streams was an obvious starting point. Initially, a 5-year historic average was analyzed to comport with the state spending cap, however the 5-year look-back did not result in the best outcomes when tested against several economic scenarios. The 5-year look back period is too short, often not incorporating both the peaks and valleys of the typical business cycle. Instead the 5-year average caused the BRF threshold to grow too quickly near the end of economic expansions and not grow enough following an economic downturn. During the peak of economic expansion only years of economic growth are typically incorporated into the average, creating a BRF deposit threshold that was higher than the long-term average revenue collections from the targeted sources and resulting in a lower than optimal required BRF deposit. Similarly, following an economic downturn the 5-year measure included too many years of economic decline or stagnation and was below the long-term average revenue collections from the targeted sources, resulting in a higher than optimal required BRF deposit.

¹ There is a statistically significant relationship between changes in net tax revenue the prior year and total annual expenditures across all appropriated funds over the period of FY 1994-2015. There is no statistically significant relationship between the spending cap and total annual expenditures across all appropriated funds during the same period.



The solution was simple; extending the calculated average revenue collections to 10 years resulted in a BRF deposit threshold that better represented the long-term average performance of the targeted revenues sources by generally incorporating both periods of economic expansion and economic downturns. The outcome was a BRF deposit threshold that produced lower annual volatility in General Fund revenue collections from the targeted revenue sources.

Moving the average beyond 10 years created other problems. The measure is designed to represent the long-run performance of the revenue sources, but due to structural changes in the economy the long-run performance of the revenue sources can change over time. The number of years used in the average, therefore, needed to be long enough to provide a good representation of long-term performance, including both periods of economic expansion and downturns, but not so long that the measure did not adequately adjust to reflect structural economic changes. Our analysis of the BRF deposit threshold found a 10-year average to be the Goldilocks length of time for establishing a simple measure that is long enough to reflect average long-run performance, but not so long that the measure fails to adjust to new economic realities caused by structural changes in the economy.

Applying the lessons learned in developing the BRF deposit rules to the spending cap

The Connecticut State Constitution requires appropriations to be capped based upon an annual growth rate of either personal income or inflation. It requires the legislature to define the measures of personal income and inflation that determine the allowable annual growth in capped appropriations. The Spending Cap Commission has been charged with defining the terms of the Constitutional spending cap. As the commission approaches this important work it should seek to adopt measures that lower the annual volatility in the allowable growth rate of capped appropriations and that, like the BRF deposit threshold, does not allow spending to rise too fast in good economic times or contain spending too much during economic recoveries. A spending cap with lower annual volatility will result in greater long-term stability in state expenditures and may encourage adherence by future legislatures by requiring less drastic year over year changes in appropriations levels.

Historically, with one exception, the personal income measure and not the inflation measure has been used to establish the allowable growth rate under the spending cap. State statute defines the personal income measure for the spending cap as the “increase in personal income in the state for each of the preceding five years, according to the United States Bureau of Economic Analysis data.”² In practice the personal income measure has been calculated using the 5 year compound annual growth rate (CAGR)³ for the 5 most recent fiscal years.⁴ Using a 5-year CAGR reduces the volatility of annual change in the personal income measure significantly as compared to using an annual measure. Volatility can be further reduced if the look-back period is extended. A longer look-back period produces less annual volatility and in the long-run is likely to more closely reflect the long-term ability of Connecticut residents to pay for government services by more regularly incorporating both years of economic expansion and downturns.

² C.G.S. 2-33a.

³ CAGR is the mean annual growth rate over a specified period of time longer than one year.

⁴ In FY 2015 Section 35 of PA 15-244 changed the personal income calculation from the CAGR of the previous 5 fiscal years to “the average of the annual increase in personal income in the state for each of the preceding five calendar years. The change from fiscal year to calendar year sunsets after FY 2017.



The chart and graph below compare the volatility of annual personal income growth to 5 and 10-year CAGR measures of personal income growth over the time period 1994-2014⁵ using standard deviation.⁶

PERSONAL INCOME ⁷ VOLATILITY AS MEASURED BY STANDARD DEVIATION FY 1994-2014	
1 Year	2.6%
5 Year	1.1%
10 Year	0.9%

⁵ The time period 1994 to 2014 was chosen for analysis because the calculation of the personal income measure was consistent over the period, calculated on a fiscal year basis. Personal income was calculated on a calendar year basis in FY 1993 and in FY 2015. All analysis is based on revised statistics as reported by BEA, which may in some instances differ from the data available at the time of the original cap calculation.

⁶ Standard deviation is a measure of volatility. It measures the dispersion of a set of data from its mean. The more spread apart the data, the higher the deviation. Standard deviation is calculated as the square root of variance. A lower standard deviation means less variation from the mean and in the case of the spending cap less significant annual changes in the allowable growth rate of capped expenditures.

⁷ Note historical calculations of Personal Income and CPI-U utilize adjusted Bureau of Economic Analysis and Bureau of Labor Statistics. Calculations performed at the time Budget Acts were passed used the data available at the time of the calculation which in many cases has since been adjusted by the agency responsible for producing the measure. As a result the data presented does not always exactly match the calculations performed prior to the underlying data being adjusted.



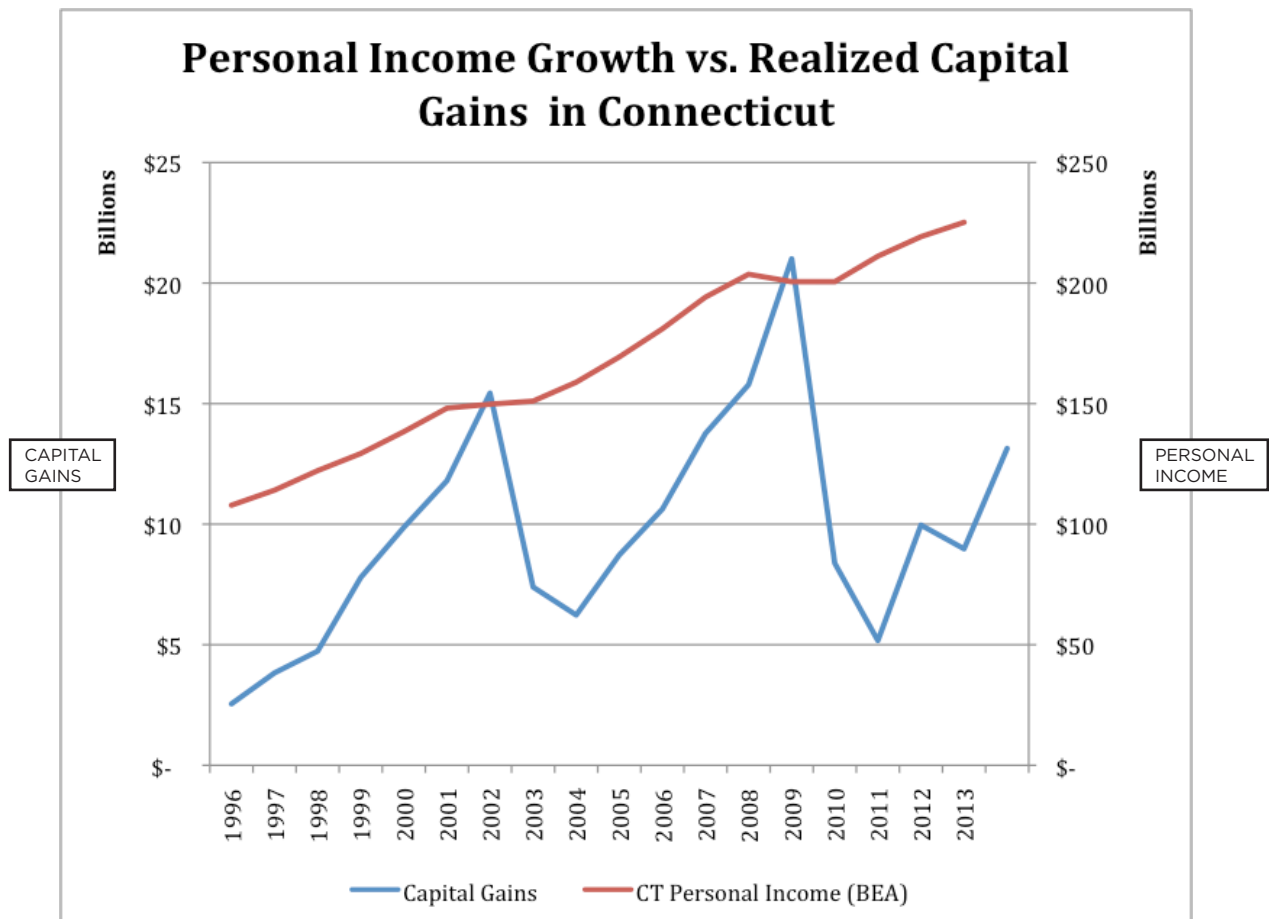


As the chart and graph above indicate, the 10-year CAGR personal income measure produces the lowest level of annual volatility. Adopting a personal income measure that best lowers the volatility of allowable growth under the cap year to year would improve the stability and predictability of state budget appropriations and allow for better long-term strategic planning by the legislature.

In addition, extending the look-back period for calculating the personal income measure generally places stricter limits on expenditure growth during the peak of economic expansions and places less constraints on spending growth during economic recoveries. Combined, the two effects would result in more stable budgeted appropriations over-time. Appropriations would be lower leading into a recession creating larger budget reserves to support higher levels of spending during an economic downturn.

Volatility and Capital Gains

Managing the volatility of the personal income measure by extending the time period used to calculate the CAGR or some other mechanism is important if the spending cap is to be an effective tool in improving state budget stability in Connecticut in the future. It is even more important should the Commission choose to adjust the definition of personal income to incorporate realized capital gains as has been discussed by some Commission members. Realized capital gains are a legitimate component in accurately measuring the overall ability of state residents to fund government services as measured by personal income. Realized capital gains are also significantly more volatile than personal income as measured by BEA (see chart below).



The volatility of realized capital gains should not dissuade the Commission from considering their inclusion in the definition of personal income under the spending cap, but their inclusion should be paired with mechanisms to otherwise reduce the overall annual volatility of the state spending cap.

The definition of the personal income measure for the Constitutional spending cap has been, and is likely to be in the future, the primary determinant of allowable annual growth of appropriations of capped expenditures. Establishing a definition of personal income that better manages the annual volatility of the spending cap will make it an effective tool in managing state budget stability and ensuring state government lives within its means.

Managing volatility of the allowable growth rate under the spending cap with the inflation measure

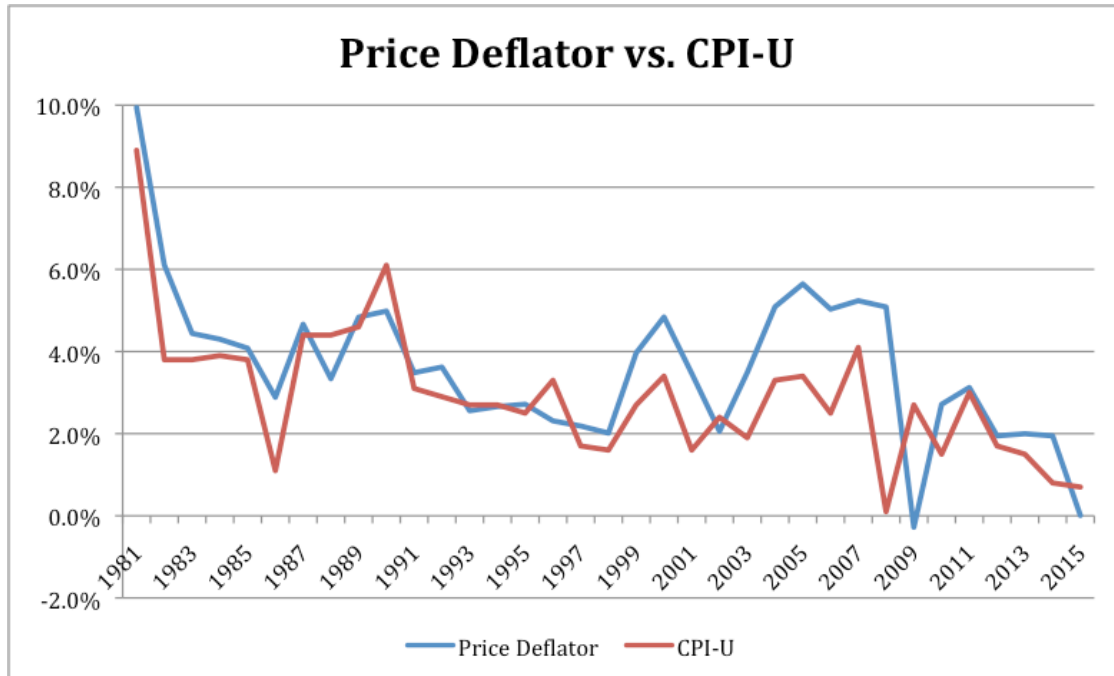
In addition to changing the methodology for calculating personal income, the Commission may also look to lower annual volatility in changes in the spending cap by changing the inflation measure. Current statute defines inflation as the urban consumer price index (CPI-U). In practice this has been the CPI-U for the most recent available calendar year. Generally, personal income grows faster than CPI-U. As a result, the inflation measure of the statutory spending cap has only been utilized once to establish the allowable growth of appropriations for capped expenditures. An alternative inflation measure may have a different result.

An inflation measure that is more specific to the cost increases in the market basket of goods generally purchased by state government, which differs significantly from the market basket of goods purchased by the typical consumer, may at times produce a higher annual inflation rate and therefore may more often impact the spending cap calculation. Depending on when and how an alternative inflation measure impacts the spending cap, it will either increase or decrease the volatility of the annual spending cap calculation.

One option for an alternative inflation measure is the Government Consumption Expenditures and Gross Investment measure - implicit price deflator - tracked by the Federal Bureau of Economic Analysis (herein referred to as the price deflator). The price deflator tracks changes in state and local government spending over-time.⁸ In the absence of an inflation measure weighted for the basket of goods more commonly purchased by state and local governments, the nationwide changes in state and local government expenditures is a reasonable proxy for changes in government spending driven by costs and market conditions. Below is a graph comparing the annual change in the price deflator to the CPI-U since 1981.

⁸ More specifically the price deflator measures – “Government consumption expenditures and gross investment measures the portion of gross domestic product (GDP), or final expenditures, that is accounted for by the government sector.” BEA. “Definitions and Concepts Recording in the NIPAs; Overview of Source Data and Estimating Methods: Chapter 9 – Government Consumption Expenditures and Gross Investment”. November 2011. <http://www.bea.gov/national/pdf/ch9%20govt%20cc&GI%20for%20posting.pdf>





The price deflator has tracked very closely with CPI-U over this time period, but has outstripped CPI-U during periods of strong economic growth. The price deflator also has a higher average annual growth rate.

The higher average annual growth rate of the price deflator, if continued in the future and used as the inflation measure for the spending cap, could result in the inflation measure setting the annual cap on appropriations more regularly. Specifically, the significant increase in the price deflator during periods of strong economic growth could result in certain instances where the inflation measure determines the annual increase in spending rather than the growth in personal income during periods of economic expansion. For instance, in 2005 the price deflator would have allowed spending to grow at a rate of 5.6% as compared to 4.5% using the 5-year CAGR of personal income or 4.6% using a 10-year CAGR of personal income. Allowing the expenditure cap to rise during economic expansions beyond the limits that would otherwise be set by the personal income measure should be looked at carefully as it is likely to result in an increase in long-term volatility of expenditures.

Like the personal income measure, using the CAGR of the price deflator over-time lowers the annual volatility of the measure, flattening out the peaks during economic expansions and increasing allowable growth under the measure during economic recoveries.

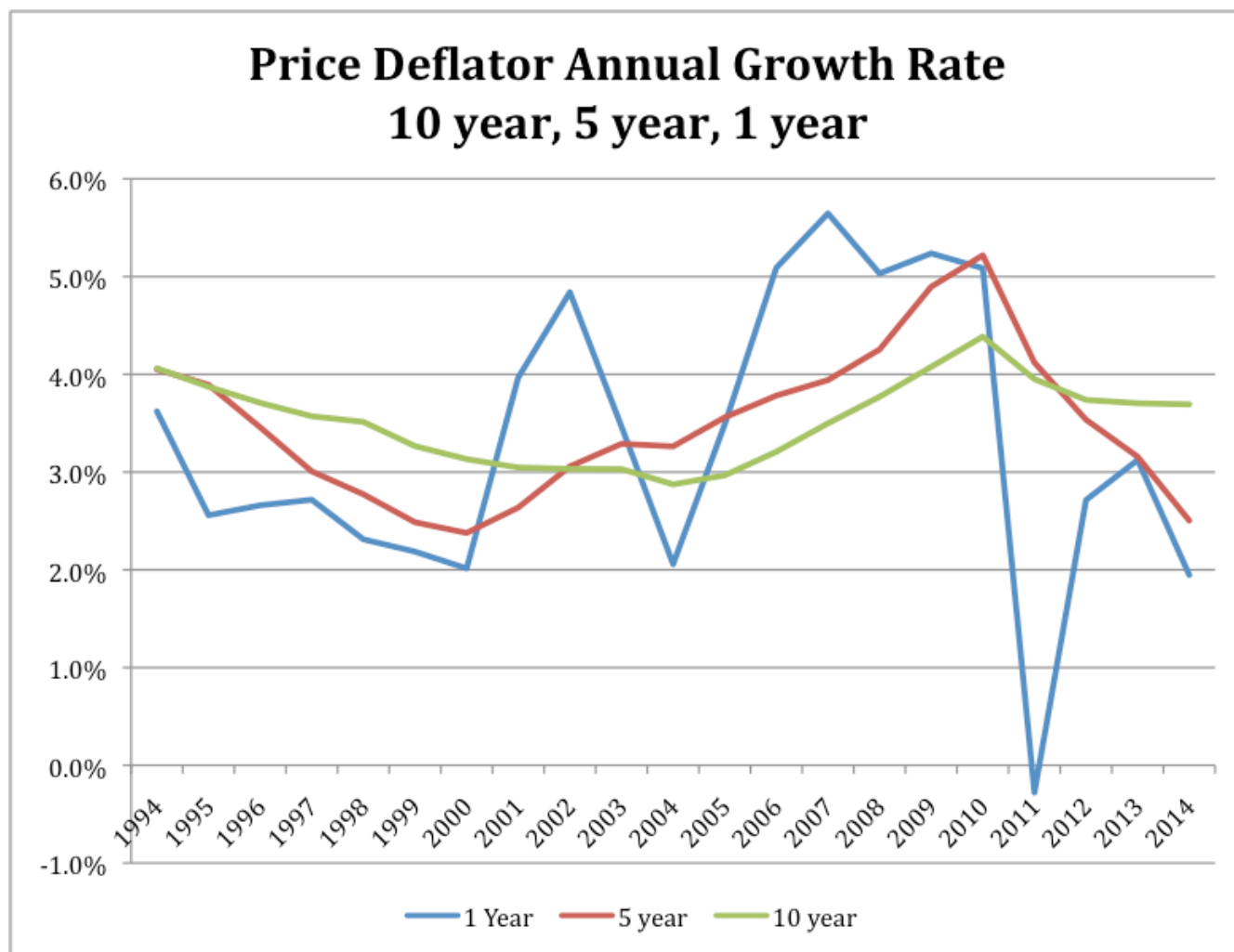
AVERAGE ANNUAL GROWTH RATE 1994-2014

CPI -U	2.5%
price deflator	3.3%

The chart and graph below compare the volatility of annual growth of the price deflator to 5 and 10-year CAGR measures of price deflator growth over the time period 1994-2014 using standard deviation.

**PRICE DEFLATOR
VOLATILITY AS MEASURED
BY STANDARD DEVIATION
FY 1994-2014**

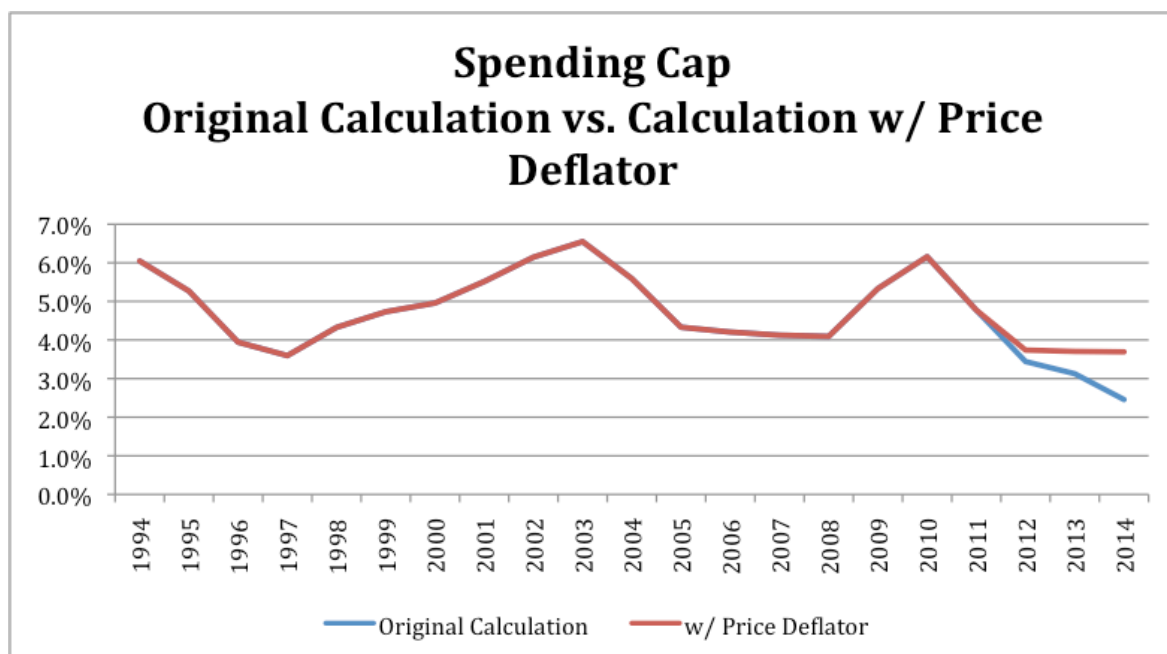
1 Year	0.9%
5 Year	0.7%
10 Year	0.4%



As the chart and graph above indicate, the 10-year CAGR price deflator measure produces the lowest level of annual volatility. Had the 10-year CAGR of the price deflator been used as the inflation measure under the spending cap, it would have reduced annual volatility of the spending cap over the evaluation period (1994-2014). The reduction in volatility is primarily the result of the price deflator setting the allowable growth rate of capped expenditures in years of economic recovery, allowing for a slightly higher level of expenditure growth than would otherwise be allowable using only the personal income measure.

SPENDING CAP VOLATILITY 1994-2014

Original Calculation	1.1%
Calculation w/ 10 year CAGR of the price deflator as inflation measure	0.9%



The price deflator is not the only alternative option for the spending cap inflation measure. Many alternatives could be devised. As the Commission considers the alternatives the impact each measure will have on the overall volatility of the spending cap should be considered. As shown above, using the CAGR of an inflation measure over several years helps to reduce annual volatility and should be considered when the Commission evaluates alternative inflation options. In addition it is important that any alternative measure of inflation be based on reliable national statistics that cannot be gamed by policy makers on the state level.

Combined impact

The analysis above indicates that extending the number of years used to calculate the personal income measure under the spending cap from 5 to 10 years and changing the inflation measure to a 10-year CAGR of the price deflator each independently have the effect of lowering the annual volatility of the spending cap by .2%. Using both a 10-year CAGR of personal income and a 10-year CAGR of the price deflator for the inflation measure reduces the volatility of allowable growth under the spending cap slightly more.

SPENDING CAP VOLATILITY 1994-2014	
Original Calculation	1.1%
Calculation with 10 year CAGR of PI and 10 year CAGR of the price deflator	0.9%

Combining both a 10-year CAGR of personal income and a 10-year CAGR of the price deflator for the inflation measure does not significantly reduce the volatility of spending cap limits compared to either option alone, however it does result in a better distribution of allowable growth in appropriations of capped expenditures across the business cycle. It places a tighter cap on the growth in appropriations at the peak of economic expansions than adding the 10-year CAGR of the price deflator alone and is less restrictive during periods of economic recovery than would be allowable using the 10 year CAGR for personal income alone.

It is also important to note that the majority of the volatility present in the combined measure is attributable to the earliest fiscal years in the evaluation period, which were impacted by abnormally high personal income growth during the 1980s. Changing the analysis period to begin in FY 2000 drastically reduces the volatility of a spending cap calculation using the combined options as compared to the current calculation of the cap.

SPENDING CAP VOLATILITY 2000-2014	
Original Calculation	1.1%
Calculation with 10 year CAGR of PI and 10 year CAGR of the price deflator	0.6%



Extending the number of years used to calculate the CAGR of personal income and inflation under the spending cap lowers annual volatility, however as the above example indicates, the extent of the reductions is dependent upon the economic scenario to which it is applied. We cannot predict the economic conditions of the future, but we do know that incorporating more years into the personal income and inflation measures of the spending cap will reduce the annual volatility. A less volatile spending cap, if adhered to, will produce more stable state expenditures over-time. Spending during the peak of economic expansions will be restrained. Excess revenues produced during economic expansions will be available to support greater spending during economic downturns. The redistribution in state spending will allow state expenditures to better match needs, spending less when need is low and more when need is high; decreasing the need for crisis driven tax increases and service cuts. The increased predictability could help increase business and consumer confidence in the state of Connecticut, improving our state's economy and image.

Conclusion

In closing, the spending cap is another tool the state can use to manage expenditure volatility over the course of the business cycle. In order for the spending cap to be an effective tool, and arguably to encourage compliance with the cap by future lawmakers, the Commission should consider defining personal income and inflation under the Constitutional spending cap in a manner that reduces the annual fluctuations in the allowable growth under the spending cap. A less volatile limit on annual appropriations is likely to elicit greater compliance by future governors and legislatures by requiring less drastic and difficult adjustments to the budget in order to comply with the cap. Combined with the Budget Reserve Fund deposit rules, which go into full effect in FY 2020, the spending cap will help the state build larger budget reserves to weather future economic downturns. Larger budget reserves will reduce the need for service cuts and tax increases during future economic downturns – speeding the state's economic recovery and ensuring state services are available when they are most needed. Thank you for the opportunity to speak to the Commission regarding the state spending cap and for your work on this important issue.

