State Notes

TOPICS OF LEGISLATIVE INTEREST

Fall 2023

Stability and Resiliency: Examining Ongoing School Aid Fund Revenue Sources
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Executive Summary

- Proposal A created a system through which the State provides most of the revenue used to fund K-12 education. A mix of revenue from the lottery and taxes provides ongoing School Aid Fund (SAF) revenue.
- Stability has been a primary concern of education funding, particularly maintaining revenue levels as the economy changes over time. Most SAF revenue sources exhibit much greater stability than revenue sources to the General Fund (GF).
- Although ongoing SAF revenue has grown consistently, the growth has often not kept pace with inflation. Adding new SAF revenue sources has reduced the losses due to inflation, yet inflation-adjusted fiscal year (FY) 2024-25 SAF revenue is projected to be below the level in FY 1994-95. Ongoing SAF revenue is likely to continue growing more slowly than inflation.

Introduction

Adopted in 1994, Proposal A fundamentally changed how public education in Michigan was financed. Before Proposal A, State funding represented approximately 30% of revenue directed to public elementary and secondary schools in Michigan, while local revenue represented approximately 60% and was largely generated by local property taxes. Proposal A eliminated local school property taxes levied on homestead property for operating purposes, replaced the lost revenue with money from the State (changing the tax structure to provide the funding), and instituted a new formula for determining school funding. In 1995, the first full year under Proposal A, State funding represented almost 70% of revenue for public elementary and secondary schools in Michigan while local revenue represented less than 25%.

A consistent concern of education funding has been revenue stability. Even before Proposal A, revenue to the SAF was dominated by sources that, historically, have been stable. The focus on stability in education revenue represents a combination of the priority of education funding relative to other State and local spending decisions and the long-term commitment of providing a kindergarten-through-high school education.

A related concern to stability is whether revenue can keep up with inflation. Inflation is a concern because, just as inflation erodes the buying power of consumer income, if SAF revenue is unable to keep pace with inflation the buying power of revenue to support education will fall. The overwhelming majority of revenue from the SAF pays for K-12 operational expenses, such as employee salaries, schoolbooks, and energy costs. If SAF revenue is unable to keep pace with inflation, the impact may mean fewer teachers, older schoolbooks, and reduced services.

Since Proposal A was enacted, SAF revenue has grown consistently and has exhibited negative growth in only four of the 27 years between FY 1994-95 and FY 2021-22. In every year between FY 2012-13 and FY 2021-22, ongoing SAF revenue posted a new record high. However, despite these gains, when adjusted for inflation (as measured by the State and Local Government Deflator), ongoing SAF revenue declined in 12 of the 19 years between FY 2000-01 and FY 2019-20. Furthermore, even with sizeable increases in ongoing SAF revenue in FY 2020-21 and FY 2021-22,

under the May 2023 Consensus Revenue Estimating Conference (CREC) estimates, by FY 2024-25, ongoing inflation-adjusted SAF revenue will be 1.4% below the FY 1994-95 level.

This paper will compare the stability of SAF and GF revenue since FY 1994-95, including the stability of individual revenue sources directed to the SAF, as well as the ability of SAF and GF revenue to keep pace with inflation. The analysis will demonstrate that ongoing SAF revenue does exhibit stability and will continue to do so, particularly when compared to GF revenue, but that SAF revenue growth is unlikely to keep pace with inflation.

Background

When school funding was more local in nature and relied on local property taxes, the concern with revenue stability was largely met. Property tax revenue is characterized by stability because property values rarely swing drastically. When property values do vary, the swings affect specific properties in ways particular to that specific property (e.g., a business closes, a home burns down, a new home is constructed on a vacant lot, a new business locates in a community) rather than affecting an entire community's tax base in the same direction. Even in declining communities or rapidly growing communities, the year-to-year-swings in the aggregate tax base are incremental rather than drastic.

Proposal A created a mix of taxes providing revenue to the SAF that either exhibited a demonstrated history of stability or were likely to be stable:

a) Sales and use taxes: these taxes are based on the consumption of taxable goods and services. Both research and experience show that consumption is much more stable over time than is income.

b) State education property tax: as discussed in the preceding paragraph, property taxes are stable—and a property tax levied on a statewide basis will exhibit fewer swings than a local property tax.

c) Lottery profits: with the exceptions of swings attributable to large multi-state jackpots (something that did not start until several years after Proposal A), lottery revenue has exhibited limited variation over time.

d) Tobacco and liquor taxes: although the long-term trend for tobacco taxes (at a constant tax rate) has declined for years, both of these types of taxes exhibit only incremental year-to-year changes (whether positive, like liquor tax revenue, or negative).

In FY 1994-95, these four revenue sources accounted for almost 85% of ongoing tax and lottery revenue dedicated to the SAF. Ongoing SAF revenue does not include all SAF revenue that may be available for appropriation in a given year. Instead, ongoing SAF revenue reflects all revenue from any taxes, lottery profits, or fees, that are statutorily and constitutionally dedicated to the SAF. As a result, ongoing SAF revenue excludes other SAF revenue that may be available, such as the beginning balance, Federal aid, the GF grant, etc.

An earmark of Individual Income Tax (IIT) revenue was another significant source of ongoing SAF revenue as well as a key component of Proposal A's funding decisions. The IIT earmark provided 12.6% of ongoing SAF tax and lottery revenue in FY 1994-95. Although income taxes exhibit less stability than the four types of revenue sources mentioned earlier, the concern with preserving SAF revenue was evident when Public Acts 1 through 6 of 1999 enacted a five-year phased-in reduction

of the IIT rate from 4.4% to 3.9%. Public Act 1 of 1999 altered the earmark of IIT revenue to the SAF so that changes in the tax rate would not reduce SAF revenue (meaning the impact of any rate reductions would fall only on the GF). The automatic adjustment to hold the SAF harmless for rate changes has applied to all IIT rate changes since then, not just those associated with the 1999 legislation.

The SAF receives revenue from a variety of sources, including State taxes, proceeds from the Michigan lottery, the Federal government, other State funds, and funds carried over from previous years. The CREC estimates ongoing SAF revenue from sources that are statutorily or constitutionally dedicated to the SAF. In FY 2021-22, this ongoing revenue totaled $17.9 billion, compared to $23.5 billion in total SAF from all revenue sources (including $2.9 billion of revenue carried over from the previous fiscal year), and represented approximately 76.2% of total SAF revenue. Figure 1 illustrates the various revenue sources for ongoing SAF revenue under the May 2023 forecast for FY 2022-23. Revenue from the sales tax represents $7.9 billion, or 44.6%, of the expected $17.7 billion of ongoing SAF revenue forecasted for FY 2022-23. The use tax, the complementary tax to the sales tax, is forecasted to provide another $858.4 million, or 4.8%, of ongoing SAF revenue, so that general consumption taxes (i.e., combined sales and use taxes) represent approximately half of all ongoing SAF revenue. Other major sources of ongoing SAF revenue include the IIT ($3.8 billion/21.6%), the State Education Tax (SET) ($2.6 billion/14.7%), and the State Lottery ($1.2 billion/6.9%). The "other" category in Figure 1 includes revenue from the industrial and commercial facility tax (IFT/CFT), the commercial forest tax, and a number of miscellaneous specific taxes that generate limited revenue.

Figure 1

FY 2022-23 School Aid Fund Revenue Sources (May 2023 CREC): $17,741.5 million
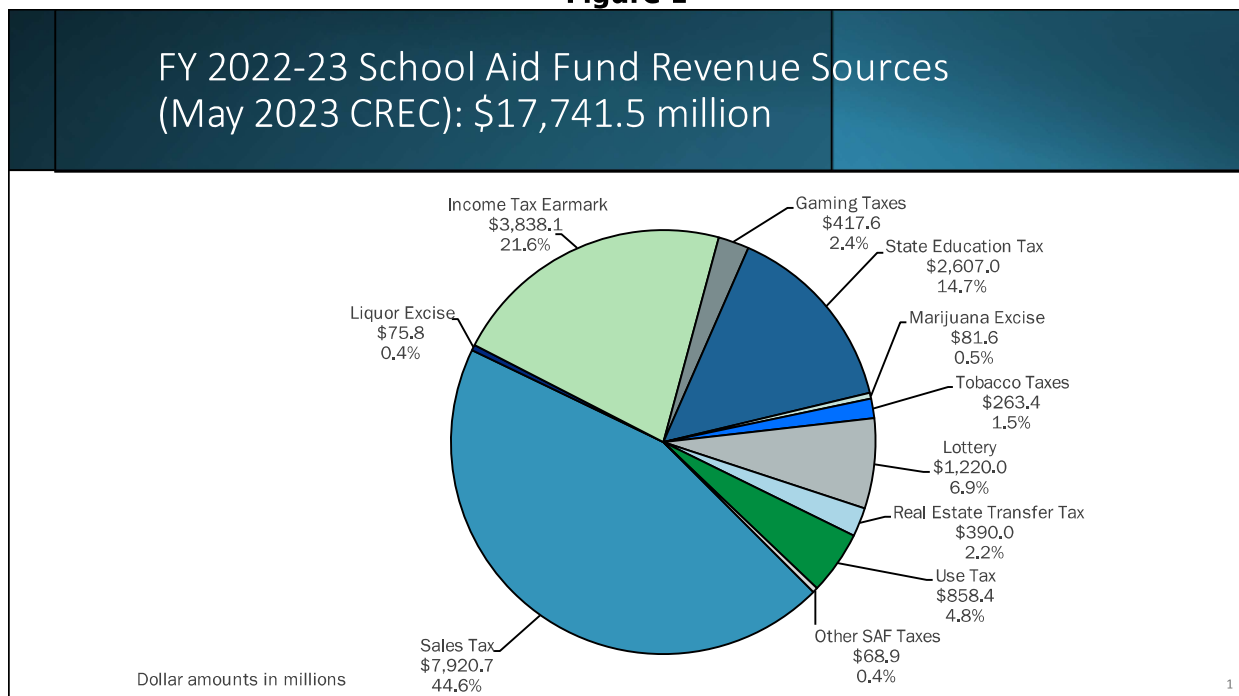
The mix of sources for ongoing SAF revenue has remained consistent over time, with the only changes being: 1) an earmark of revenue from the Michigan Business Tax (MBT), between FY 2007-08 and FY 2010-11, 2) the recent addition of revenue from the Marihuana Excise Tax as a result of Proposal 1 of 2018, and 3) additional revenue from certain expansions in legal gaming, adopted in

2019. Other than these three changes, sources of ongoing SAF revenue have remain unchanged since Proposal A.

The MBT was first levied in tax year 2008 and was repealed for most taxpayers beginning tax year 2012. Reflecting concerns with revenue stability and funding adequacy, the earmark was adjusted each fiscal year to reflect inflation. The earmark of MBT revenue to the SAF ended in FY 2010-11. Between FY 2007-08 and FY 2010-11, the MBT earmark to the SAF added between $680.0 million and $760.0 million per year on a full-year basis.

Two recent tax changes reflect the most recently added earmarked revenue sources to the SAF and both began contributing revenue in FY 2020-21. First, Proposal 1 of 2018 legalized recreational marijuana sales in Michigan and directed excise tax from those sales to several funds, including the SAF. Over the forecast period, excise taxes on recreational marijuana are expected to generate approximately $80-$90 million per year in SAF revenue. Second, and an even more significant source of revenue, reflects gaming taxes associated with the 2019 legislation that expanded legal gambling to electronic/internet wagers and sports betting. Over the forecast period, tax revenue from these expansions of gaming activity is predicted to generate approximately $314-$336 million in SAF revenue.

Figure 2 shows ongoing SAF revenue since FY 1994-95, as well as the May 2023 CREC estimates for FY 2022-23 through FY 2024-25. Between FY 1994-95 and FY 2018-19, ongoing SAF revenue grew at an average annual rate of 2.8% and increased in all but four fiscal years. The only time ongoing SAF revenue declined in two consecutive years was in FY 2008-09 and FY 2009-10, reflecting the impact of the 2008-09 recession (the "Great Recession"). Once the COVID-19 pandemic began, Federal stimulus measures significantly increased personal income and significant portions of consumer spending shifted from services (which are generally not subject to sales and use taxes—taxes that represent a significant portion of ongoing SAF revenue) to goods (which are generally subject to sales and use taxes). The effect of both increased income and increased spending on goods resulted in combined sales and use tax revenue rising 18.8% in FY 2020-21 and 11.0% in FY 2021-22, while ongoing SAF revenue increased 14.8% and 11.4%, respectively.

Figure 2
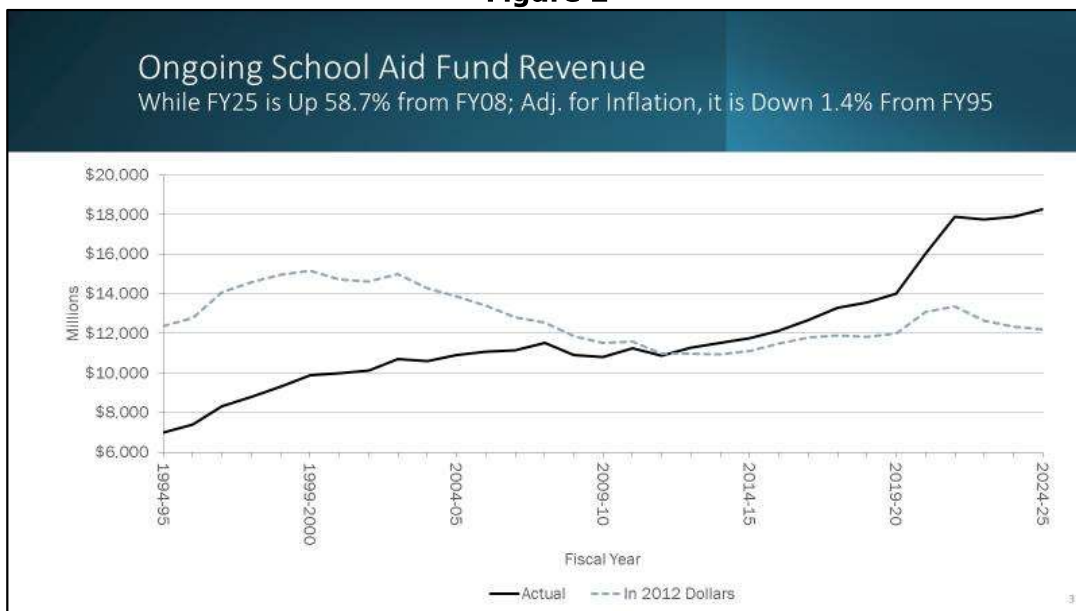
The May 2023 CREC estimates forecast relatively flat SAF revenue from FY 2022-23 to FY 2024-25 due to factors pushing revenue in different directions. The estimates predict a gradual return to a more traditional mix between goods and services for consumer spending, which will limit the growth in sales and use tax revenue. Similarly, higher interest rates and a slowing economy are expected to reduce revenue from the real estate transfer tax (RET), which is levied when a seller sells real estate. On the other hand, inflation has raised the transaction prices for items subject to sales and use taxes and while the forecast expects inflation to slow to more normal levels, it does not expect deflation. As a result, a portion of the boost to SAF revenue experienced in FY 2020-21 and FY 2021-22 will remain as prices stabilize at the new higher levels that resulted from inflation during 2021 and 2022.

Figure 2 also illustrates the path of inflation-adjusted ongoing SAF revenue. In contrast to the steady growth in nominal (i.e., not adjusted for inflation) ongoing SAF revenue, inflation-adjusted SAF revenue has declined in most years since FY 1994-95. Although ongoing SAF revenue grew more rapidly than inflation through FY 1999-2000, between FY 2000-01 and FY 2013-14, inflation-adjusted SAF revenue increased in only three years: FY 2002-03, FY 2010-11, and FY 2012-13. Similarly, the May 2023 CREC estimates expect inflation-adjusted SAF revenue to decline every year from FY 2022-23 through FY 2024-25. These declines are forecasted despite an expected slowing in inflation. As a result, despite the addition of new SAF revenue sources like the Marihuana Excise Tax and expanded gaming, by FY 2024-25 inflation-adjusted ongoing SAF revenue is estimated to be 1.5% below the FY 1994-95 level and 19.5% below the FY 1999-2000 level.

Legislative Changes: Baseline and Net Revenue

As the preceding discussion suggests, this paper seeks to evaluate actual revenue received by the SAF rather than the underlying economic activity supporting revenue. This paper does *not* construct a baseline revenue series, where all statutory changes, earmarks, and transfers are removed. Instead, this paper focuses on the actual revenue received and thus volatility will reflect not only changes in the underlying economic activity that is taxed but statutory changes that may alter the revenue received by a specific fund. As a result, a recession, changes in consumer spending patterns, and stock market variability will contribute to revenue volatility, as will changes in tax rates, changes in the earmarking of revenue to different funds, and changes to the tax base (such as exempting an activity from the sales tax or increasing the personal exemption under the IIT). This paper will thus focus on net revenue received by the respective funds.

Measuring Growth Rates and Volatility

Revenue collections change over time, reflecting the influence of many short-term and long-term factors. For example, income taxes will reflect long-term trends related to economic growth as well as swings in the stock market. Similarly, sales tax collections will vary based on the underlying growth in personal income and inflation, but also short-term price changes that may reflect localized shortages, weather and/or natural disasters, or political factors such as trade disputes. Corporate income taxes will also follow general trends that reflect economic growth but can swing widely as a result of various accounting charges, business acquisitions and mergers, or even swings in exchange rates.

When a data series changes over time, mathematical techniques must be used to transform the data so that traditional statistical measures such as averages and standard deviations produce meaningful results. For instance, using the dollar levels of a time series (for example, the amount of sales tax revenue received each year) may present statistical issues, but using the growth rate

in sales tax revenue may not. All of the data series have been adjusted to ensure the results are statistically valid. In some cases, such as when comparing the volatility of different taxes, because the issue is relative volatility rather than measure the specific level of volatility, the measures will not be converted back into dollar values. Similarly, trend growth will be expressed in percentage terms rather than dollar amounts.

Revenue Volatility

The degree to which tax collections vary over time will depend on the economic nature of the activity subject to tax. As mentioned above, property values tend to exhibit significant stability. General consumption taxes tend to exhibit limited volatility, as consumers use savings and credit to maintain spending when income falls (and increase saving/pay down debt when income rises). While income taxes largely reflect wage income, which tends to be stable over time (although wage income can vary significantly in periods of high inflation or during recessions when there is high unemployment), most of the variation in IIT revenue stems from changes in factors such as capital gains, which are driven by swings in stock market activity.

One way to measure volatility is the standard deviation, which measures how different individual observations are clustered around the average value. A series with a high standard deviation will have many values that differ substantially from the average. As a result, the greater the standard deviation, the more volatile the data. Statistical theory indicates that approximately 68% of observations will fall within one standard deviation of the average (or mean) and that around 95% of observations are within two standard deviations of the mean. For example, if "Tax A" generated an average of $10.0 million per year, but exhibited a standard deviation of $1.5 million, then 68% of the time the tax would be expected to produce revenue between $8.5 million and $11.5 million, and 95% of the time collections would total between $7.0 million and $13.0 million. In contrast, if "Tax B" generated the same average of $10.0 million per year but with a standard deviation of $2.5 million, 68% of the time revenue would vary between $7.5 million and $12.5 million, and 95% of the time collections would vary between $5.0 million and $15.0 million. In this example, "Tax B" would be more volatile (revenue would swing between $5.0 and $15.0 million 95% of the time) than "Tax A" (where 95% of the time revenue would swing between $7.0 million and $13.0 million).

When series have different average values, the standard deviations will differ even if the variability is the same. As a result, simply comparing standard deviations does not provide an effective way to evaluate relative volatility. Using the previous example of Tax A and Tax B, if Tax B averaged $100.0 million instead of $10.0 million, but exhibited the same variability as Tax A, the standard deviation would be $15.0 million instead of $1.5 million. Statistically, the solution is to look at the coefficient of variation (CV), which divides the standard deviation by the mean (average). In the first example, Tax A would have a CV of 0.15 while Tax B would have a CV of 0.25, indicating that Tax B is more volatile. In the second example, both taxes would have a CV of 0.15, indicating the same degree of volatility.

Table 1

Tax	School Aid Fund	General Fund
Coefficients of Variation for Select Taxes and Funds 1996-2019		
Sales	1.67	262.81
Use	3.35	16.78
Income	2.33	3.60
SET	2.65	NA
RET	3.27	NA
Tobacco	-6.78	38.21
IFT/CFT	-4.97	NA
Liquor	0.47	0.51
Casino	2.10	NA
Lottery	1.75	NA
Other	6.10	NC*
Total*	**1.23**	**6.44**
Inflation (State & Local Price Deflator)		0.53

*Note: The School Aid Fund column includes all ongoing SAF revenue sources. Except for the "Total" line, the General Fund column includes only revenue sources that provide revenue to both the SAF and the GF. Although GF revenue sources that do not contribute to the SAF could be included under the "Other" line, the revenue sources would not include the same taxes; thus, the value is shown as "NC" for "Not Comparable". However, the "Total" line for GF does reflect the CV for all ongoing GF revenue sources, not just those listed in the table.

Table 1 presents the CVs for ongoing SAF revenue sources. As illustrated in the table, total ongoing SAF revenue exhibited a CV of 1.23 over the 1996-2019 period (changes since the emergence of COVID-19 are discussed later). Compared to the CV for GF tax revenue of 6.44, ongoing SAF revenue is substantially more stable and exhibits roughly one-fifth the volatility of GF tax revenue.[1] In contrast, over the same time period, inflation as measured by the State and Local Price Deflator[2] exhibited a CV of 0.53—less than half the volatility of SAF revenue. The smaller CV for inflation does _not_ mean that SAF revenue grows faster or slower than inflation; it means that inflation deviates less from its average value than does SAF revenue. In other words, inflation is less volatile than SAF revenue.

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[1] In the context of this paper, stability and volatility are evaluated in a comparative sense rather than an absolute sense. In statistics, a CV of 1.0 is frequently considered the critical value for stability in an absolute sense. If the CV is less than 1.0, the series is considered low variance, while a CV in excess of 1.0 is considered high variance. As a result, statistically almost all tax revenue series would be considered high variance in an absolute sense. However, the CVs examined in this paper could reach values considerably in excess of 1.0 (especially as a result of policy actions that substantially altered collections directed to a specific fund—CVs for some GF revenue sources exceeded 100.0). In that context, a series with a CV of 1.23 (like total SAF revenue) will look "stable" and exhibit "low variance" when compared to a series with a CV of 6.44 (like total GF tax revenue).

[2] Multiple measures of inflation exist. Because this paper focuses on the stability and adequacy of revenue received by the State of Michigan, inflation is measured by the State and Local Price Deflator, which evaluates the inflation relevant to state and local governments in the United States. For a more complete discussion of various inflation measures see Zin, David, "Half Empty or Half Full: Perspectives on Adjusting Tax Provisions for Inflation", Senate Fiscal Agency, _State Notes_, Spring 2016. (https://www.senate.michigan.gov/sfa/publications/notes/2016notes/notesspr16dz.pdf)

Although overall SAF revenue exhibits significant stability compared to GF revenue, the stability differs across individual revenue sources. The most stable revenue source for ongoing SAF revenue is liquor tax revenue, with a CV of 0.47 (slightly less volatile than inflation), while the most volatile is revenue from tobacco taxes, with a CV of -6.77 (the downward trend on tobacco tax revenue produces a negative value, but tobacco taxes are almost 15 times as volatile as liquor tax revenue). The CV for tobacco taxes is volatile because of tax rate changes, not because of deviations associated with consumption. If the tax changes that took effect in FY 2002-03 are removed from the data, the CV for tobacco taxes falls to -2.13 and the most volatile revenue source becomes use tax revenue (reflecting both consumer behavior in which more activity has been subject to the use tax, such as consumption of telecommunications services and increased online purchases, as well as policy changes which expanded the reach of the use tax to cover more online transactions). It is not surprising that the CV for SAF sales tax revenue, at 1.67, is only slightly higher than for total ongoing SAF revenue because the sales tax comprises such a significant portion of total revenue. Despite provisions in the IIT to increase stability in the revenue earmark to the SAF (the earmark is based on gross collections and is held harmless for rate changes), IIT revenue to the SAF exhibits a CV of 2.33, about 40% more volatility than SAF sales tax revenue.

Despite the sometimes-drastic changes in revenue flows during and after the initial months of the COVID-19 pandemic, the relative volatility between different SAF revenue sources has remained mostly unchanged. When collections through FY 2021-22 are added to the analysis, casino tax collections represented the only SAF revenue source to see a marked shift in volatility compared to other SAF revenue, which is not surprising given that the Detroit casinos were closed from the middle of March 2020 through July 2020, and operated under restrictions for several months thereafter, with collections not returning to something approximating pre-pandemic levels until March 2021. As a result, while the COVID-19 pandemic increased the volatility of most sources of ongoing SAF revenue, the relative volatility between different revenue sources remained virtually unchanged for all but casino tax revenue, which went from being the second-most stable revenue source (after liquor taxes) to the third-most volatile (after IFT/CFT and RET). Looking forward through FY 2024-25, although the May 2023 CREC forecasted SAF revenue sources to return to more historical revenue trends through FY 2024-25, under the forecast the overall volatility measures for each revenue source will remain relatively unchanged from the values exhibited through FY 2021-22.

Keeping Pace with Inflation

As discussed earlier, revenue volatility is a separate issue from revenue keeping pace with inflation. Tax collections can vary significantly from year to year and still, on average, grow faster than inflation. As the economy grows in inflation-adjusted terms, broad-based taxes such as the IIT and the sales tax should grow more rapidly than inflation as the inflation-adjusted tax base expands—assuming all other factors are held constant. Revenue sources with narrower bases, such taxes on specific goods or services, will be more likely to exhibit different growth rates than the overall economy, increasing the chances by which revenue growth differs from inflation.

Table 2

Average Annual Revenue Growth 1996-2019		
Tax	**School Aid Fund**	**General Fund**
Sales	2.2%	0.2%
Use	2.6%	0.8%
Income	5.0%	2.9%
SET	2.9%	NA
RET	5.8%	NA
Tobacco	-0.8%	0.6%
IFT/CFT	-4.1%	NA
Liquor	4.3%	4.5%
Casino	1.4%	NA
Lottery	2.8%	NA
Other	2.2%	NC*
Total*	**2.8%**	**1.2%**
Inflation (State & Local Price Deflator)		3.0%

*Note: The School Aid Fund column includes all ongoing SAF revenue sources. With the exception of the "Total" line, the General Fund column includes only revenue sources that provide revenue to both the SAF and the GF. Although GF revenue sources that do not contributed to the SAF could be included under the "Other" line, the revenue sources would not include the same taxes; thus, the value is shown as "NC" for "Not Comparable". However, the "Total" line for GF does reflect the average annual revenue growth for all ongoing GF revenue sources, not just those listed in the table.

Between 1996 and 2019 (the growth in 1996 reflects growth from the 1995 level), most SAF revenue sources failed to grow as fast as inflation, despite several extended episodes of low inflation over the period. (This period also pre-dates the inflation that grew out of the COVID-19 pandemic.) As seen in Table 2, of the 11 revenue sources that provided SAF revenue over the majority of this period, eight grew less than inflation. Over the 24 years, only revenue from the IIT, liquor taxes, and the RET grew faster than inflation. The failure to keep pace with inflation did not reflect one or two years of low revenue for individual revenue sources. With the exception liquor tax revenue, no individual source grew faster than inflation in more than 13 of the 24 years over this period. Liquor tax revenue grew faster than inflation in 18 of the 24 years, followed by both the use tax and the RET, which grew faster than inflation in 13 of the 24 years. Six of the 11 revenue sources grew by less than inflation in more than half of the years: casino taxes, tobacco taxes, IFT/CFT taxes, the sales tax, the SET, and the "other" category (which aggregates a number of taxes that collectively account for less than 0.2% of ongoing SAF revenue). Two revenue sources, tobacco taxes and IFT/CFT, exhibited a declining revenue trend.

Figure 2 shows that, in FY 2020-21, inflation-adjusted SAF rose above the FY 1994-95 level for the first time since FY 2006-07. Substantial increases in sales tax, use tax, and IIT revenue during the pandemic, combined with the addition of new SAF revenue sources like the excise tax on marijuana and expanded gaming, resulted in inflation-adjusted SAF revenue exceeding the FY 1995-96 level in both FY 2020-21 and FY 2021-22. However, under the May 2023 CREC forecast, inflation adjusted SAF revenue is expected to drop below the FY 1995-96 level again in FY 2022-23 through FY 2024-25. However, under the May 2023 forecast for FY 2024-25, use taxes and the SET will have joined

IIT, liquor taxes, and the RET as revenue sources that have kept pace with inflation over the 1996-2025 period, even if overall SAF revenue has not.

The contribution of the new revenue sources to the SAF fund beginning in FY 2020-21 accounts for almost all of the revenue that allowed the SAF to catch up with inflation in FY 2020-21 and FY 2021-22. However, even with the additional revenue, inflation-adjusted SAF revenue was still below the levels in FY 1996-97 through FY 2005-06. As the growth rates for these new revenue sources stabilize, the matter of total SAF revenue keeping pace with inflation will re-emerge.

While the mix of revenue sources to the SAF promotes stability in SAF revenue, the nature of most of the SAF revenue sources suggest inflation will continue to rise faster than collections. As mentioned earlier, both tobacco and IFT/CFT taxes are on long-term downward trends. Constitutional limitations on the growth in taxable value for individual properties mean that SET revenue will generally grow about the same rate as inflation.[3] Gaming revenue, including the lottery, faces an increasingly saturated market and the fastest growing gaming segments contribute less revenue per gaming dollar than the segments from which they are attracting wagers. Furthermore, gaming revenue generally grows more slowly than the growth in personal income, reflecting both individuals who do not game and the way many gamers allocate spending across different priorities. Sales taxes are generally levied on sales of tangible goods, and over time consumers have spent an increasing portion of income on services, which are generally not subject to tax. As a result, moving past FY 2024-25, the only revenue sources likely to keep pace with inflation will be the same three sources that outpaced inflation over the 1996-2019 period (the IIT, RET, and liquor taxes) and, overall, the SAF will continue to lose ground versus inflation.

Demographics and Funding Shifts

While the preceding analysis accurately describes the experience of aggregate ongoing SAF revenue, the analysis omits two factors relevant to the appropriation of SAF revenue: declining student counts and the diversion of SAF to support community colleges and higher education. Reflecting broader demographic trends, the number of K-12 pupils supported by SAF fund has steadily declined since FY 2002-03. As of FY 2021-22, the number of pupils funded by SAF revenue was 11.8% below the level in FY 1994-95 and 18.1% below the level in FY 2002-03. Additionally, since FY 2011-12, a portion of SAF revenue has been used to partially fund community colleges and higher education. Using SAF revenue to support community colleges and higher education complicates any comparison of per-pupil revenue with data before FY 2011-12 and has lowered the SAF revenue directed to K-12 spending.

Without accounting for using SAF revenue to support community college and higher education, ongoing SAF revenue per pupil has largely failed to keep pace with inflation. Between FY 1995-96 and FY 2018-19, ongoing SAF revenue per pupil rose more rapidly than inflation in only five of the 24 years. Revenue per pupil will change if either the revenue changes or if the pupil count changes. As a result, changes in pupil counts may either magnify or offset changes in SAF revenue, depending on the magnitude of pupil changes. If pupil counts rise more rapidly than revenue, per pupil revenue will fall even if the revenue increases. For example, total SAF revenue rose faster than inflation in 12 of the years between FY 1994-95 and FY 2018-19. However, pupil counts generally rose between FY 1994-95 and FY 2002-03, and increased more rapidly than revenue, thus offsetting the SAF revenue increases--even though SAF revenue grew more rapidly than inflation. As a result, gains

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[3] Article IX, Section 3 of the Michigan Constitution specifies that each year the taxable value of a property, adjusted for additions and losses to the property, may not increase by more than 5% or the inflation rate, whichever is less.

in nominal SAF revenue were offset because the combination of rising pupil counts and rising inflation caused inflation-adjusted revenue per pupil to decline. Similarly, after pupil counts began falling, the counts did not decline rapidly enough to offset weak growth in aggregate SAF revenue, causing inflation-adjusted SAF revenue per pupil to decline in most years.

Although per pupil SAF revenue grew faster than inflation in fewer years than did aggregate SAF revenue, declining pupil counts resulted in per pupil revenue losing ground against inflation at a slower rate than for aggregate revenue. In FY 2018-19, inflation-adjusted SAF revenue was 4.5% below the FY 1994-95 level, while on a per pupil basis SAF revenue was 3.6% above the FY 1994-95 level. Similarly, inflation-adjusted SAF revenue fell 22.0% between FY 1999-2000 and FY 2018-19, while on a per pupil basis SAF revenue declined 9.9%. Rapid growth in SAF revenue combined with falling pupil counts to reverse this trend and increase inflation-adjusted SAF revenue per pupil to a record high in FY 2021-22. However, the May 2023 CREC forecasts for inflation, SAF revenue, and pupil counts project the downward trend in inflation-adjusted SAF revenue per pupil will resume, with inflation-adjusted per pupil SAF revenue falling 7.4% between FY 2021-22 and FY 2024-25.

Shifting a portion of SAF revenue to fund community college and higher education has reduced per pupil SAF revenue more than these figures illustrate. For example, in FY 2021-22, accounting for revenue directed to community college and higher education lowers inflation-adjusted per pupil SAF revenue by $580 per pupil. Similarly, accounting for revenue directed to community college and higher education indicates that inflation-adjusted per pupil revenue declined 3.4% between FY 1994-95 and FY 2018-19, and fell 15.9% between FY 1999-2000 and FY 2018-19.

Conclusion

This paper has examined ongoing SAF revenue to evaluate two factors: 1) the stability of revenue sources contributing to ongoing SAF revenue, and 2) the ability of ongoing SAF revenue to maintain purchasing power against inflation. The analysis demonstrates that policymakers have largely succeeded in producing a relatively stable mix of revenue sources for the SAF. The volatility of total SAF revenue is approximately one-fifth the level observed for ongoing GF revenue. Furthermore, the majority of individual SAF revenue sources exhibit less volatility than almost every major GF revenue source.

However, ongoing SAF revenue has failed to keep pace with inflation. In 50% of the years between 1996 and 2019, ongoing SAF revenue rose by less than inflation and, despite rising faster than inflation during the FY 2019-20 through FY 2021-22 period, is projected to grow more slowly than inflation from FY 2022-23 through FY 2024-25. The addition of new revenue sources to ongoing SAF revenue, such as MBT revenue between FY 2007-08 and FY 2010-11 and, since FY 2020-21, revenue from expanded gaming taxes and the Marihuana Excise Tax, have mitigated the declines in inflation-adjusted SAF revenue but have not enabled ongoing SAF revenue to consistently keep pace with inflation. As a result, ongoing SAF revenue in FY 2024-25 is expected to be 1.5% below the FY 1994-95 level and down 19.5% from the FY 1999-2000 level. Based on the current mix of revenue sources for ongoing SAF revenue, inflation will consistently rise more rapidly than ongoing SAF revenue in fiscal years beyond FY 2024-25.