State Notes

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An Evaluation of the Public Assistance and Child Welfare Caseload Consensus Process
By John Maxwell, Fiscal Analyst

Similar to most other states, the State of Michigan projects annual revenue for the current fiscal year by way of a revenue estimating conference each January and May. The Management and Budget Act requires the May revenue estimating conference, in addition to the revenue estimates, to include "expenditure forecasts for [M]edicaid expenditures and for human services caseloads and expenditures for the fiscal year in which the conference is being held and the next 2 ensuing fiscal years". This paper summarizes the human services (non-Medicaid) side of the forecasting with the caseload and expenditures forecasts made from fiscal year (FY) 2010-11 through FY 2016-17 and offers a set of possible improvements to the process.

The caseload consensus process consists of three principal forecasters: the State Budget Office (SBO), the House Fiscal Agency (HFA), and the Senate Fiscal Agency (SFA), with the Department of Health and Human Services (DHHS) available as a reference resource. These entities work to determine the estimated caseloads, expenditures, and the total appropriations for the current fiscal year and the two subsequent fiscal years. The estimating requirement is designed to make expenditures for caseload programs a technical issue in the appropriation process and to remove caseload adjustments as a negotiation tactic during the budget target-setting process to ensure an objective mechanism is used to arrive at a consensus for expenditures.

The following programs have been interpreted to be included in the 'human services caseloads' forecast: in Public Assistance, the Family Independence Program (FIP), State Disability Assistance (SDA), and State Supplementation Income (SSI); in Child Welfare, County Child Care Fund (CCF), Foster Care Payments (FC), Guardianship Assistance Program (GAP), and Adoption Subsidies (AS). This paper will not include a discussion of the CCF. Though this paper will not include an examination of the Medicaid forecasts, one statement that has been made as shorthand during the Medicaid estimating process is, "[Medicaid] expenditures forecast expenditures", which is interpreted as the number of cases in Medicaid is relatively independent from expenditures. There could be a large increase in less expensive Medicaid case types that would see a large increase in caseload, but little to no increase in expenditures. More so than for Medicaid, the Public Assistance program caseloads can drive expenditures as the number of cases and the amount of the benefit is formula-driven. If there is an increase in FIP caseloads, there is a certain minimum benefit amount, which means expenditures will scale in concert. Forecasting child welfare expenditures is similar to forecasting Medicaid because there is a weaker correlation between child welfare caseloads and expenditures.

Since the forecasted consensus process is completed once per year, any increase or decrease in the interim period after the forecast will not be included in the annual budget process, but can be adjusted through legislative transfers or supplemental appropriations. The goal of the consensus process is make the caseload and expenditure estimates as close to the actual final expenditures as possible. If there is a case in which a program has had a dramatic increase in utilization, the department would need additional funding through a supplemental appropriations bill or legislative transfer to ensure complete program funding. The idea behind the process is to have enough line-item authorization for the program not to incur a shortfall, but not to have an instance where the line-item authorization is greater than necessary. For

budgeting purposes, the most important forecast is the current fiscal year followed by the forecast for the next fiscal year. The forecast for the fiscal year subsequent to the next fiscal year, for all intents and purposes, could be considered advisory.

If the forecasted amount is less than the actual amount, there will be a shortfall in the line item that will need to be corrected legislatively through either a transfer or supplemental. If the forecasted amount is greater than the actual amount, the budgetary risk is somewhat lessened because the funds would lapse at the end of the fiscal year. But, if there was a large General Fund/General Purpose (GF/GP) component to the program, those lapsed funds have an opportunity cost in that they could have been reserved for another purpose instead of sitting as an "empty authorization" in that line item. A trust factor also weighs into these forecasts because if a consensus line item is continually under or overestimated, legislators could become concerned that the estimates for the program are being influenced to avoid revision. In theory, by using three different estimates from three separate agencies, the consensus process should remove outlier forecasts for an average projected amount. The average amount should lead to a more accurate forecast, but since the assumptions each party uses may change from year to year depending on staff involved and methodology used, errors could compound over time.

This portion of the paper evaluates caseload estimates from FY 2010-11 through FY 2016-17 (where data are available). The consensus process produces a final estimate that is the basis for a mid-fiscal year adjustment and the foundation of the following fiscal years' caseload and expenditures. Comparing the actual program caseloads and actual expenditures to the separate three agency estimates and the consensus estimate can delineate the accuracy of a given agency's forecast performance and the consensus figures. Comparison of past forecasts gives context to how the agencies and the consensus process have performed. Though it is possible that the forecast differences are due to nothing other than chance, unknown external shocks, or policy changes, a review of the results shows the efficacy of the consensus process. A critical examination of the results of forecasting provides a basis to review methods for the caseload consensus process and ways to improve the process.

Caseload Forecast Analysis

Table 1 shows the cumulative percentage difference of the absolute value between a given estimate and the actual average caseload. This method was used to standardize differences and allow comparisons across programs. The data include the average differences between the actual caseload, consensus, and the three agency forecasts. The forecasts are completed for the current fiscal year (CY_0),[1] the following fiscal year (CY_1),[2] and the fiscal year following (CY_2).[3]

[1] CY_0 means the forecast value for the current fiscal year, i.e. in May 2013 the CY_0 forecast would be for FY 2012-13 adjusting the appropriation for the remaining six months of the fiscal year.
[2] CY_1 means the forecast value for the subsequent fiscal year, i.e. in May 2013 the CY_1 forecast would be FY 2013-14 (forecast for utilization up to 18 months away).
[3] CY_2 means the forecast value for the year following the subsequent fiscal year, i.e. in May 2013, the CY_2 forecast would be FY 2014-15.

Table 1

Summary of Absolute Value of Percentage Difference in Estimated Caseload Consensus Cases to Actual Cases					
FY 2010-11 through FY 2016-17	**State Budget Office Estimate**	**House Fiscal Agency Estimate**	**Senate Fiscal Agency Estimate**	**Consensus Estimate**	**Average Estimate**
Estimates for Current Fiscal Year Cases					
Family Independence Program	1.6%	2.0%	3.3%	2.1%	2.3%
State Disability Assistance	2.1	2.3	2.1	2.2	2.0
State Supplementation	0.1	0.3	1.0	0.2	0.3
Public Assistance Avg.	**1.3%**	**1.5%**	**2.1%**	**1.5%**	**1.5%**
Foster Care Payments	4.1	5.5	5.4	5.2	5.2
Adoption Subsidies	1.0	1.4	0.7	1.0	1.0
Guardianship Assistance Program	2.6	4.4	3.5	1.4	1.4
Child Welfare Avg.	**2.6%**	**3.8%**	**3.2%**	**2.5%**	**2.5%**
Total Forecast Avg.	**2.3%**	**3.3%**	**3.0%**	**2.3%**	**2.3%**
Estimates for Second Fiscal Year Cases					
Family Independence Program	14.4%	17.0%	12.1%	14.8%	14.5%
State Disability Assistance	16.9	14.3	15.3	16.0	15.5
State Supplementation	1.2	1.7	2.0	1.2	1.3
Public Assistance Avg.	**10.8%**	**11.0%**	**9.8%**	**10.7%**	**10.4%**
Foster Care Payments	10.4	6.7	7.8	9.1	8.1
Adoption Subsidies	3.4	3.7	3.0	3.3	3.2
Guardianship Assistance Program	9.7	9.8	11.7	7.6	8.4
Child Welfare Avg.	**7.8%**	**6.7%**	**7.5%**	**6.7%**	**6.6%**
Total Forecast Avg.	**8.4%**	**7.6%**	**8.0%**	**7.5%**	**7.3%**
Estimates for Third Fiscal Year Cases					
Family Independence Program	41.2%	45.4%	43.8%	43.3%	43.5%
State Disability Assistance	38.3	32.1	37.1	35.5	35.8
State Supplementation	2.3	3.3	3.2	2.1	2.4
Public Assistance Avg.	**27.3%**	**26.9%**	**28.0%**	**27.0%**	**27.2%**
Foster Care Payments	15.6	8.7	11.3	13.9	11.9
Adoption Subsidies	6.3	5.2	5.4	5.7	5.7
Guardianship Assistance Program	21.1	11.2	12.7	13.7	15.0
Child Welfare Avg.	**14.3%**	**8.4%**	**9.8%**	**11.1%**	**10.9%**
Total Forecast Avg.	**16.9%**	**12.1%**	**13.4%**	**14.3%**	**14.1%**
Note: Guardianship Assistance Forecasts began with FY 2014-15.					

As shown in Table 1, outside of CY_0 forecasts, the forecast caseloads for public assistance are more volatile than the child welfare caseloads. Because the most recent data is used, forecasts for the current fiscal year have the greatest degree of accuracy. For CY_0, the average difference of the consensus figure across public assistance (PA) programs was 2.0% and child welfare (CW) programs was 2.5%. The State Budget Office had the lowest average difference for PA programs at 1.3% and for CW programs at 2.6%. In the longer-term analysis, the PA estimates were more volatile.

For PA program caseload forecasts, SSI forecasting were the most consistent. Family Independence Program and SDA had the greatest difference between forecasted caseload and actual caseload. Over the three forecast period types, SSI averaged a 1.7% difference among the agency forecasts, while the consensus forecast averaged a 1.2% difference for SSI.

As with SSI, the CY_0 forecasts for FIP and SDA were within approximately 2.0% of the actual caseload. In CY_1 and CY_2, the forecasted amount diverged from actual figures. For SDA, the average difference over CY_1 and CY_2 forecast periods was 25% because from FY 2010-11 through FY 2016-17, actual SDA cases decreased from 10,019 cases to 3,991. Over that time period, the forecast annual change in caseload were SBO: -0.2%, HFA: -2.96%, SFA: -1.41%, and consensus: -1.52%. State Disability Assistance caseload declined a total of ~60% with an average annual caseload decline of 14.2%. The decline in the SDA caseload accelerated over the study period with the greatest declines in FY 2014-15 and FY 2015-16.

For Family Independence Program forecasts the volatility was even greater than SDA. From FY 2010-11 through FY 2016-17, the actual FIP cases decreased from 83,537 cases to 20,388, a 75.6% decline. The average annual decline in caseload was 20.8%. The forecast annual average declines in caseload by agency were SBO: -5.3%, HFA: -3.8%, SFA: -4.6%, and consensus: -4.7%. The decline slowed in recent years, but the declines still were larger in magnitude than projected. Total duplicated PA programs covered by consensus declined from on average 344,615 in FY 2010-11 to 294,077 in FY 2016-17, a 14.6% decline.[4]

The CW program caseload projections as shown in Table 1 showed less overall volatility than the PA programs, for CY_0, Child Welfare programs were not as accurate as the PA caseloads. Adoption Subsidies was the most accurate forecasting where over the analysis period, the average forecasted difference was 3.4%. The AS cases were mostly flat, in FY 2010-11 the cases were 27,127 and in FY 2016-17 the cases were 23,782, a 12.3% decline. Foster Care Payments average difference was 8.4% with a decline of 10.0%, and Guardianship Assistance Program was 9.6% with an increase in caseload of 251% (due to an increase from a small base, from 313 cases to 1,100 cases).

Expenditures Forecast Analysis

From a budgeting perspective, the forecast of the expenditures is the most critical piece in the consensus process. In the past, appropriations bills have included an average caseload figure, but the legal authority for these programs are granted by the Legislature through an appropriation of funds, not a caseload appropriation. For some programs (e.g. FIP), the entitlement is tied to a benefit formula in which the expenditures are a function of the caseload. By way of arithmetic, the expenditure data will capture the change in caseload in that the two are highly correlated and any change in expenditures will capture caseload changes.

As shown in Table 2, expenditure variances are greater than the caseload differences. Larger differences in the expenditures illustrate that even if a caseload estimate is accurate, an

[4] Duplicated caseload means that there are program cases who participate in multiple programs, so the caseload participants cannot be counted independently. For example, a FIP participant could be enrolled in SDA as well, so that person is counted twice in PA recipient totals.

increase in the relative cost per case would lead to an increase in expenditures that an analysis focused solely on caseload changes would overlook.

Table 2

Summary of Absolute Value of Percentage Difference in Estimated Expenditures Cases to Actual Expenditures					
FY 2010-11 through FY 2016-17	**State Budget Office Estimate**	**House Fiscal Agency Estimate**	**Senate Fiscal Agency Estimate**	**Consensus Estimate**	**Average Estimate**
Estimates for Current Fiscal Year Expenditures (CY_0)					
Family Independence Program	4.3%	3.1%	4.0%	3.6%	3.6%
State Disability Assistance	3.9	2.9	3.4	3.3	3.2
State Supplementation	0.4	1.6	3.0	0.4	0.4
Public Assistance Avg.	**2.9%**	**2.5%**	**3.5%**	**2.4%**	**2.4%**
Foster Care	7.1	6.5	7.2	7.0	6.4
Adoption Subsidies	0.8	1.3	1.5	0.9	0.9
Guardianship Assistance	4.9	7.8	5.2	4.9	4.8
Child Welfare Avg.	**4.3%**	**5.2%**	**4.6%**	**4.3%**	**4.0%**
Total Forecast Avg.	**4.0%**	**4.7%**	**4.4%**	**3.9%**	**3.7%**
Estimates for Second Fiscal Year Expenditures (CY_1)					
Family Independence Program	23.8%	24.4%	21.0%	22.9%	22.9%
State Disability Assistance	20.7	15.0	17.7	18.4	17.8
State Supplementation	2.8	2.5	4.6	2.5	3.2
Public Assistance Avg.	**15.8%**	**14.0%**	**14.4%**	**14.6%**	**14.6%**
Foster Care	8.8	6.0	5.1	6.3	4.9
Adoption Subsidies	5.9	6.3	5.2	5.8	5.3
Guardianship Assistance	7.3	8.1	6.6	5.3	6.0
Child Welfare Avg.	**7.3%**	**6.8%**	**5.6%**	**5.8%**	**5.4%**
Total Forecast Avg.	**9.0%**	**8.2%**	**7.4%**	**7.6%**	**7.2%**
Estimates for Third Fiscal Year Expenditures (CY_2)					
Family Independence Program	56.8%	58.7%	58.1%	57.3%	58.0%
State Disability Assistance	48.9	35.8	45.1	43.0	43.2
State Supplementation	4.7	2.9	6.7	3.6	4.8
Public Assistance Avg.	**36.8%**	**32.5%**	**36.6%**	**34.6%**	**35.3%**
Foster Care	8.1	9.3	7.8	5.1	4.8
Adoption Subsidies	7.6	8.7	8.0	7.8	7.8
Guardianship Assistance	13.2	8.9	15.5	12.8	12.0
Child Welfare Avg.	**9.6%**	**9.0%**	**10.4%**	**8.6%**	**8.2%**
Total Forecast Avg.	**15.1%**	**13.7%**	**15.7%**	**13.8%**	**13.6%**
Note: Guardianship Assistance Forecasts began with FY 2014-15.					

For PA expenditure forecasts in Table 2, the program with the least variance is SSI. The average percentage difference was 1.1% for CY_0, 3.3% for CY_1, and 4.8% for CY_2. This variability is a little higher than the caseload differences for SSI. State Supplementation Income has experienced stable expenditures over the study period (in FY 2010-11 expenditures were

$59.2 million; in FY 2016-17, they were $60.2 million, and the average expenditure over the study period was $60.7 million) so a prediction of flat expenditures has been correct.

In contrast to SSI, the other two PA programs experienced more pronounced expenditure changes. State Disability Assistance expenditures declined by 67.7% from FY 2010-11 to FY 2016-17. For CY_0, CY_1, and CY_2, SDA had greater variability than SSI, as the average differences were 3.4%, 17.8%, and 43.2% respectively. For FIP, the decline in expenditures was even larger than SDA (78.5%, from $414.8 million in FY 2010-11 to $89.4 million in FY 2016-17) as was the variance between the forecast and the actual expenditures: CY_0: 3.8%, CY_1: 23.1%, and CY_2: 57.9%. The average difference across the three programs was as follows: CY_0: 3.0%, CY_1: 14.7%, and CY_2: 35.3%. Total Public Assistance expenditures for consensus-covered programs decreased from $505.4 million in FY 2010-11 to $159.7 million, a 68.4% decline.

In a similar vein to the caseload forecasts, there was less of a variance in Child Welfare programs than in Public Assistance forecasts. Adoption Subsidies was the lowest in overall variance with an average of 5.0% variance over the study period. For CW expenditure forecasts, there is much less volatility than the PA forecasts. None of the three CW programs experienced near the variance in expenditure forecasts as FIP or SDA observed. In fact, in total, CW programs experienced an increase in expenditures, but were less volatile, as Foster Care Payments and Guardianship Assistance Program averaged 7.3% and 8.6% variance respectively. Foster Care Payments averaged a 2.2% annual increase with an overall increase in expenditures from $168.9 million in FY 2010-11 to $192.5 million in FY 2016-17, a total 14.0% increase. Guardianship Assistance Program is a smaller program than either AS or FC, so the total increase from $1.4 million to $9.5 million is the largest percentagewise, but when included in total with the other two CW programs, GAP does not factor overall. The average difference in estimates across the three programs was CY_0: 4.7%, CY_1: 6.6%, and CY_2: 9.7%. As stated in the caseload discussion, there was a greater degree of stability in the CW expenditures forecast as the differences observed for the CW cases were less in each forecast period. Total CW expenditures for consensus covered programs were $385.0 million in FY 2011-12 and $414.5 million in FY 2016-17, a 7.1% increase.

Impact of Forecast Differences

Achieving an accurate forecast for caseload figures is a worthwhile exercise to get a handle on the direction and magnitude of utilization of PA and CW programs but, from a fiscal perspective, caseloads are secondary to expenditures. Expenditures are the pertinent figures taken from the consensus process and are the input which creates constraints on what revenue is available to complete the budget. Therefore, the effect of variability in the expenditure forecasts creates risks for appropriations.

If a consensus expenditure for a line item was agreed to and the actual demand for the program was greater than anticipated, there would be a shortfall in the line item. If, on the other hand, there were a desire to avoid a shortfall and instead increase the authorization to ensure there was no shortfall, with more authorization than an objective forecast process would deem necessary, there would be "empty authorization" and the line item would lapse funding. There is a tension between the two effects. If the expenditures decrease more than anticipated in the consensus forecast, a lapse in the line will occur and that money will lead to a stronger position on the balance sheet at the end of the fiscal year. If the expenditures increase faster than

forecast, the administration, through SBO, must come back to the legislature and request either a transfer or a supplemental. The two effects can work in opposite directions if different assumptions are made. For example, if there were a shortfall in GF/GP for PA caseloads, but there was "excess authorization" for GF/GP in CW caseloads, the effects could counter each other with a minimal net variance as surplus funding in CW lines could be transferred to eliminate the PA shortfall. The impacts become muted as the total number of cases in PA have declined so substantially that forecast precision for CW cases has become more important from a budgeting standpoint.

Excess authorization becomes more of a problem in line items with a greater percentage of GF/GP funds. Public Assistance caseload line items have a higher percentage of GF/GP in their financing than do CW programs. In the study period, the PA GF/GP average was 49.0%. The percentage of GF/GP in the PA lines has been increasing, as seen in Table 3, as the total expenditures have been declining, mainly due to FIP Federal funding maintenance of effort requirements. The percentage of GF/GP in the CW consensus line-items has stayed consistently between 34.7% and 39.3%.

Table 3

Summary of Fund Sources for Consensus Actual Expenditures

Consensus Forecast Type	Fiscal Year	Gross Amount	Federal Amount	Restricted Amount	Private Amount	Local Amount	GF/GP Amount	GF/GP Financing Percentage
Public Assistance								
	2010-11	$505,412,979	$242,620,081	$70,639,800	$0	$0	$192,153,098	38.0%
	2011-12	356,705,844	161,254,900	65,280,152	0	0	130,170,793	36.5
	2012-13	296,230,958	84,773,500	57,837,460	0	0	153,619,998	51.9
	2013-14	237,901,179	59,870,200	49,591,590	0	0	128,439,390	54.0
	2014-15	206,358,932	38,858,300	47,015,701	0	0	120,484,931	58.4
	2015-16	174,962,673	53,883,400	45,064,686	0	0	76,014,586	43.4
	2016-17	159,728,186	46,823,600	15,562,480	0	0	97,342,106	60.9
	Average							**49.0%**
Child Welfare								
	2010-11	$384,981,946	$222,950,790	$0	$1,199,645	$17,905,527	$142,925,984	37.1%
	2011-12	386,236,997	215,099,428	0	3,255,100	16,141,000	151,741,470	39.3
	2012-13	419,346,665	241,012,466	0	1,708,834	17,719,130	158,906,234	37.9
	2013-14	426,415,920	243,511,932	0	2,899,114	14,767,512	165,237,361	38.8
	2014-15	427,862,958	254,753,845	0	2,437,596	15,627,764	155,043,753	36.2
	2015-16	415,066,244	249,849,614	0	2,302,929	18,754,000	144,159,701	34.7
	2016-17	414,493,366	249,105,865	0	1,770,738	15,652,123	147,964,639	35.7
	Average							**37.1%**

For the forecasts of PA expenditures, there appears to have been a slight tendency toward excess authorization. The Appendix shows the cumulative Gross forecast expenditures compared with the cumulative Gross actual expenditures over the study period for the three forecast types. Table 4 contains the GF/GP variances for the cumulative differences between the forecasts and the actual expenditures. As shown in the Appendix and Table 4, over the study period, there was total of an additional $33.9 million in PA Gross authorization for consensus numbers for CY_0. In the case of CW consensus expenditures, the reverse is true; the forecast expenditures were $26.0 million less than the actual expenditures. The total CY_0 consensus difference for the two caseload types was an overestimation of $7.9 million Gross and $6.9 million GF/GP. The GF/GP number was fairly large due to the overestimation for PA

programs, which had a higher percentage component of GF/GP than the CW programs. For CY_1, the total consensus overestimation was $329.8 million Gross and $158.9 million GF/GP. The total PA overestimation for CY_1 was $306.5 million Gross and $150.2 million GF/GP. For CW, the overestimation for CY_1 was $23.3 million Gross and $8.7 million GF/GP. As the length of time of the forecast covered increased, the forecasts tended to be more variable. In CY_2, the total overestimation was $452.8 million Gross and $227.0 million GF/GP. Current Year $_2$ PA was $494.9 million Gross and $242.6 million GF/GP and for CW, the totals were underestimated by $42.1 million Gross and $15.6 million GF/GP.

Excess authorization in the line items became concentrated in the PA programs as the program declined to historically low levels. If there is a recession, it is possible that a trend similar to the one that occurred in the early 2000's could emerge where caseloads could increase precipitously with large unplanned GF/GP costs. The trade-off between keeping GF/GP available and reducing the need to request more funding from the Legislature is the push and pull of the consensus process.

Over the study period, for the six consensus programs, all the agencies had a tendency to overestimate public assistance expenditures, as shown in the Appendix. For the CW programs, the SBO was the closest as it overestimated by $49.8 million and the two fiscal agencies underestimated, -$162.0 million for the HFA and -$264.0 million for the SFA. In total, for all forecasted time periods CY_0-CY_2, the consensus forecast overestimated by $790.5 million, the SBO overestimated by $920.2 million, the HFA overestimated by $659.7 million, and the SFA overestimated by $569.3 million. On a percentage basis, the four forecasts seem reasonably within the range of the total forecast amounts: CY_0 range of 0.8% to -0.8%, for CY_1 between a range of 6.2% to 10.1% and for CY_2 between 12.6% and 15.9% range. If one were to remove the FIP forecast amounts, the variance in the remaining estimates would be less stark.

Table 4

Total GF/GP Consensus Expenditures compared to Actual Expenditures FY 2010-11 through FY 2016-17

	GF/GP Consensus Variance	GF/GP SBO Variance	GF/GP HFA Variance	GF/GP SFA Variance
Difference of Actual Expenditures to Forecasted Expenditures (CY_0)				
Public Assistance	$16,640,635	$24,195,783	$9,106,026	$12,389,611
Child Welfare	(9,653,857)	(3,391,463)	(20,933,707)	(31,223,512)
Total	**$6,986,778**	**$20,804,320**	**($11,827,681)**	**($18,833,901)**
Difference of Actual Expenditures to Forecasted Expenditures (CY_1)				
Public Assistance	$150,234,647	$157,001,227	$151,169,145	$144,550,847
Child Welfare	8,659,028	19,948,074	(7,226,408)	(24,744,190)
Total	**$158,893,675**	**$176,949,301**	**$143,942,737**	**$119,806,657**
Difference of Actual Expenditures to Forecasted Expenditures (CY_2)				
Public Assistance	$242,602,406	$245,505,898	$242,533,142	$251,534,615
Child Welfare	(15,636,597)	1,918,455	(31,976,051)	(41,987,661)
Total	**$226,965,809**	**$247,424,353**	**$210,557,090**	**$209,546,953**
Difference of Actual Expenditures to Forecasted Expenditures - Total				
Public Assistance	$409,477,688	$426,702,908	$402,808,313	$408,475,073
Child Welfare	(16,631,426)	18,475,066	(60,136,167)	(97,955,364)
Total	**$392,846,262**	**$445,177,974**	**$342,672,146**	**$310,519,710**

In general, based on the evaluation of the available data, the numbers would seem to indicate that there has been a tendency for the administration to forecast higher expenditures while the Legislature forecasts lower amounts. This is not to say that there is any explicit decision in modeling by each participating party, but the data show that, over the study period, there has been a tendency for all the models to lean toward overestimating. As assumptions from the CY_0 are trended into the CY_1 and CY_2 forecasts, large differences in expenditures could accumulate and compound if programs shift from what the model predicted in a given forecast year. This is exactly what has happened with FIP over the course of the study period. The estimate changes from year to year were not extreme enough to compensate for the fact that the program was experiencing a massive reduction in caseload and expenditures.

In looking at the total caseload sizes of these established public programs, the larger the program size, the less likely that there would be large percentage variances in the caseload. For PA, this was not the case at all. Family Independence Program had the greatest number of participants, but experienced the greatest variance over the course of the analysis period. In the case of Child Welfare, the largest program, Adoption Subsidies had the least amount of variability, so relative program size does not seem to be a primary driver of variability.

In comparing the forecasts to actual results, the forecast time period with the least amount of uncertainty, CY_0, had the greatest accuracy, which is not surprising. As the length of time of forecast coverage increased, the worse the forecast become. But variability became increasingly large for PA programs like SDA and FIP, programs that likely have a greater sensitivity to underlying economic conditions.

For the SFA, the standard method for forecasting is a time-series method where the observation of past values of the series data are used as a basis for the forecast of future values. This has been a way to obtain a decent level of accuracy in predicting short-term changes in the programs, but this method may neglect related data that may be useful in gaining insight into longer-term trends in the programs.

The first part of this paper focused on the trends for these programs and evaluated the forecasts made in the consensus process. The final part of this paper briefly summarizes possible ways to decrease volatility in forecasts to avoid excess authorization or surprise General Fund shortfalls. The first idea would be to increase the frequency of tri-agency caseload meetings to examine caseload trend changes. The DHHS has program staff that follow each of the caseload and expenditure line-items on a monthly basis. These experts could brief agency forecasters to give periodic reviews and alert forecasters if there have been large changes from trend either due to an exogenous factor or to policy changes. Another approach would be to create a "county risk report" that segments the counties with the largest usage of the consensus programs, usually the 'Big 16'[5] counties that make up approximately 80% of the total program usage. Tracking these counties specifically narrows the sensitivity to a smaller number of counties and will disproportionately affect the overall statewide expenditures. If one of these larger counties has experienced a divergence from trend or

[5] The 'Big 16' counties usually include: Wayne, Oakland, Macomb, Kent, Genesee, Washtenaw, Ottawa, Kalamazoo, Ingham, Saginaw, Muskegon, Livingston, Berrien, Jackson, Calhoun, and Saint Clair.

deviated sharply from the State averages, program staff could notify the agencies to maintain awareness sensitivity to expenditures.

Another recommendation would be to refine the models that the agencies use for forecasting. By enhancing the model, especially for CY_1, which arguably has the largest potential for errors given the length of time until the forecast is revisited, there is opportunity to tune the forecast to include other inputs to make the forecasts more reactive to variables that have strong correlation coefficients to the consensus programs. These other variables may be more systematically collected, like economic factors such as unemployment rate or a lagged birth rate variable. These variables could allow for a more precise degree of prediction. Additionally, it may be possible to undertake a long-term study which uses demographic trends in a county-by-county manner that studies their impact on program usage. The last recommendation would be to build in a trend correlation coefficient as an automatic input into the forecast, especially for CY_0 forecasts to provide a stabilizing forecast figure.

Finding a way to reduce systemic errors in the forecast while ensuring that authorizations are sufficient would increase the likelihood that the agency-forecasted figures are the most objective estimate of the appropriation needed. Since both Public Assistance and Child Welfare programs will contain inherent volatility, studying ways to reduce these expenditure variance risks through new variables or increased information flow could enhance the consensus process and help reduce both excess authorization and budgetary shortfalls.

Appendix

Total Consensus Expenditures Compared to Actual Expenditures FY 2010-11 through FY 2016-17

	Actual Expenditures	Consensus Estimate	Gross Variance	Gross SBO Variance	Gross HFA Variance	Gross SFA Variance
Estimates for Current Fiscal Year Expenditures (CY_0)						
Family Independence Program	$1,378,319,536	$1,406,509,900	$28,190,364	$43,960,264	$14,827,164	$15,172,864
State Disability Assistance	133,755,721	136,132,300	2,376,579	2,778,679	2,234,279	1,386,379
State Supplementation	425,225,512	428,605,900	3,380,388	2,621,088	1,515,088	8,715,888
Public Assistance Subtotal	**$1,937,300,769**	**$1,971,248,100**	**$33,947,331**	**$49,360,031**	**$18,576,531**	**$25,275,131**
Foster Care	1,270,814,348	1,244,301,529	(26,512,819)	(12,544,448)	(48,520,548)	(67,309,448)
Adoption Subsidies	1,561,439,957	1,560,370,700	(1,069,257)	2,054,659	(7,479,071)	(18,372,962)
Guardianship Assistance	33,110,119	34,673,300	1,563,181	1,349,181	(420,519)	1,529,381
Child Welfare Subtotal	**$2,865,364,424**	**$2,839,345,529**	**($26,018,895)**	**($9,140,608)**	**($56,420,138)**	**($84,153,029)**
CY_0 Expenditures Base Total	**$4,802,665,193**	**$4,810,593,629**	**$7,928,436**	**$40,219,423**	**($37,843,607)**	**($58,877,898)**
Estimates for Second Fiscal Year Expenditures (CY_1)						
Family Independence Program	$963,489,322	$1,241,642,300	$278,152,978	$287,470,378	$286,043,178	$259,874,778
State Disability Assistance	102,359,642	122,765,100	20,405,458	22,939,858	16,767,458	19,462,458
State Supplementation	366,038,826	373,963,000	7,924,174	9,876,374	5,578,374	15,550,274
Public Assistance Subtotal	**$1,431,887,790**	**$1,738,370,400**	**$306,482,610**	**$320,286,610**	**$308,389,010**	**$294,887,510**
Foster Care	1,101,956,509	1,111,889,133	9,932,624	33,313,691	(19,104,809)	(56,646,609)
Adoption Subsidies	1,133,469,053	1,146,200,600	12,731,547	18,651,847	579,147	(8,853,853)
Guardianship Assistance	33,110,119	33,783,600	673,481	1,798,139	(950,819)	(1,189,619)
Child Welfare Subtotal	**$2,268,535,681**	**$2,291,873,333**	**$23,337,652**	**$53,763,677**	**($19,476,481)**	**($66,690,081)**
CY_1 Expenditures Base Total	**$3,700,423,471**	**$4,030,243,733**	**$329,820,262**	**$374,050,287**	**$288,912,529**	**$228,197,429**
Estimates for Third Fiscal Year Expenditures (CY_2)						
Family Independence Program	$692,857,923	$1,142,550,100	$449,692,177	$446,972,977	$457,282,877	$457,782,117
State Disability Assistance	76,004,268	110,221,600	34,217,332	39,607,932	28,674,232	35,032,232
State Supplementation	306,319,755	317,325,500	11,005,745	14,257,545	8,816,845	20,322,845
Public Assistance Subtotal	**$1,075,181,946**	**$1,570,097,200**	**$494,915,254**	**$500,838,454**	**$494,773,954**	**$513,137,194**
Foster Care	931,840,244	918,824,000	(13,016,244)	23,208,256	(38,843,387)	(71,622,724)
Adoption Subsidies	1,133,469,503	1,108,280,300	(25,189,203)	(13,714,953)	(44,324,353)	(36,887,053)
Guardianship Assistance	33,110,119	29,172,100	(3,938,019)	(4,322,719)	(3,013,519)	(4,654,587)
Child Welfare Subtotal	**$2,098,419,866**	**$2,056,276,400**	**($42,143,466)**	**$5,170,584**	**($86,181,259)**	**($113,164,364)**
CY_2 Expenditures Base Total	**$3,173,601,812**	**$3,626,373,600**	**$452,771,788**	**$506,009,038**	**$408,592,695**	**$399,972,830**
Total Cumulative Public Assistance Expenditures	**$4,444,370,505**	**$5,279,715,700**	**$835,345,195**	**$870,485,095**	**$821,739,495**	**$833,299,835**
Total Cumulative Child Welfare Expenditures	**$7,232,319,971**	**$7,187,495,262**	**($44,824,709)**	**$49,793,653**	**($162,077,878)**	**($264,007,474)**
Total Cumulative Expenditures	**$11,676,690,476**	**$12,467,210,962**	**$790,520,486**	**$920,278,748**	**$659,661,617**	**$569,292,361**

Ellen Jeffries, Director – Lansing, Michigan – (517) 373-2768
www.senate.michigan.gov/sfa