NEW ISSUE
(Book-Entry Only)

Ratings (see "**RATINGS**")
S&P: AAA
Kroll: AAA
Moody's: Aa1
Fitch: AA+

In the opinion of Bricker & Eckler LLP, Bond Counsel, under existing law (i) assuming continuing compliance with certain covenants and the accuracy of certain representations, interest on the Series W Highway Bonds is excluded from gross income for federal income tax purposes and is not an item of tax preference for purposes of the federal alternative minimum tax under the Internal Revenue Code of 1986, as amended, and (ii) interest on, and any profit made on the sale, exchange or other disposition of, the Series W Highway Bonds are exempt from all Ohio state and local taxation, except the estate tax, the domestic insurance company tax, the dealers in intangibles tax, the tax levied on the basis of the total equity capital of financial institutions, and the net worth base of the corporate franchise tax. Interest on the Series W Highway Bonds may be subject to certain federal taxes imposed only on certain corporations. (For a more complete discussion of the tax aspects, see "TAX MATTERS" herein.)

$68,045,000
STATE OF OHIO
General Obligation Highway Capital Improvements Bonds
Series W
(Full Faith and Credit/Highway User Receipts)

Dated: Date of Initial Delivery **Due: As shown on the inside cover**

Purpose: The $68,045,000 General Obligation Highway Capital Improvements Bonds, Series W (the "Series W Highway Bonds") are general obligations of the State of Ohio (the "State"), issued to pay (i) costs of highway capital improvements, and (ii) certain costs of issuance of the Series W Highway Bonds.

Security and Sources of Payment: The full faith and credit, revenue and taxing power (excluding net State lottery proceeds) of the State, including, specifically, fees, excise and license taxes relating to the registration, operation or use of vehicles on the public highways or to fuels used for propelling such vehicles, are pledged to the payment of the principal of and interest and any premium on the Series W Highway Bonds. (See **THE HIGHWAY OBLIGATIONS GENERALLY — Sources of Payment**.)

Payment: (See **MATURITY SCHEDULES** on inside cover.) Principal of and interest on the Series W Highway Bonds will be payable to the registered owner of Highway Bonds (initially, The Depository Trust Company or its nominee ("DTC")). The principal is payable on presentation and surrender of a Highway Bond to the principal office of the bond registrar, initially the State Treasurer of Ohio (the "Treasurer"). Interest will be transmitted on each interest payment date (May 1 and November 1, beginning November 1, 2020).

Optional Redemption: The Series W Highway Bonds maturing on or after May 1, 2031, are subject to optional redemption on any date on or after May 1, 2030, in whole or in part, at 100% of the principal amount thereof, plus accrued interest to the redemption date. (See **THE SERIES W HIGHWAY BONDS — Optional Redemption of Series W Highway Bonds**.)

Form and Denomination; Book-Entry: The Series W Highway Bonds will be initially issued only as fully registered bonds under a book-entry only method in denominations of $5,000 or any multiple of $5,000 in excess thereof. DTC is the securities depository. There will be no distribution of bond certificates to others. (See **APPENDIX B — BOOK-ENTRY SYSTEM; DTC**.)

This cover page is for reference only. It is not a summary of the Series W Highway Bonds. Prospective purchasers should read the entire Official Statement.

The Series W Highway Bonds are offered when, as and if issued by the State, acting by and through the Treasurer, and accepted by the Underwriters, subject to the opinion on certain legal matters relating to their issuance by Bricker & Eckler LLP, Bond Counsel, and certain other conditions. Certain legal matters will be passed upon for the Underwriters by their counsel, Shumaker, Loop & Kendrick, LLP. PFM Financial Advisors LLC is serving as Municipal Advisor to the Treasurer. The Series W Highway Bonds are expected to be available for delivery through DTC on or about June 18, 2020.

RBC CAPITAL MARKETS

Janney Montgomery Scott **Piper Sandler & Co.**

Stifel, Nicolaus & Company, Incorporated

The date of this Official Statement is June 4, 2020, and the information speaks only as of that date.

MATURITY SCHEDULES

$68,045,000
STATE OF OHIO
General Obligation Highway Capital Improvements Bonds, Series W
(Full Faith and Credit/Highway User Receipts)

Maturity (May 1)	Principal Amount	Interest Rate	Price	Yield	CUSIP No. 677522
2021	$3,980,000	4.00%	103.325	0.170%	Z80
2022	4,580,000	4.00%	107.086	0.200	Z98
2023	4,580,000	4.00%	110.745	0.240	2A1
2024	4,580,000	4.00%	114.181	0.310	2B9
2025	4,575,000	4.00%	117.342	0.400	2C7
2026	4,575,000	4.00%	119.770	0.570	2D5
2027	4,575,000	5.00%	128.789	0.700	2E3
2028	4,575,000	5.00%	132.059	0.790	2F0
2029	4,575,000	5.00%	135.381	0.850	2G8
2030	4,575,000	5.00%	138.067	0.950	2H6
2031	4,575,000	5.00%	137.051[c]	1.040[c]	2J2
2032	4,575,000	5.00%	135.933[c]	1.140[c]	2K9
2033	4,575,000	5.00%	134.825[c]	1.240[c]	2L7
2034	4,575,000	5.00%	134.275[c]	1.290[c]	2M5
2035	4,575,000	5.00%	133.728[c]	1.340[c]	2N3

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[c] Bonds priced to a May 1, 2030 call date.

REGARDING THE USE OF THIS OFFICIAL STATEMENT

This Official Statement does not constitute an offering of any security, other than the original offering of the State of Ohio General Obligation Highway Capital Improvements Bonds, Series W (the "Highway Bonds") identified on the cover. No dealer, broker, salesman or other person has been authorized by the State or the Underwriters to give any information or to make any representations other than those contained herein and, if given or made, such other information or representations must not be relied upon as having been authorized by any of the foregoing. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the Series W Highway Bonds, by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale. Information set forth herein has been furnished by the State and other sources which are believed to be reliable but is not guaranteed as to accuracy or completeness by, and is not to be construed as a representation of, the Underwriters. References in this Official Statement to statutes, laws, rules, regulations, resolutions, agreements, reports and documents do not purport to be comprehensive or definitive, and all such references are qualified in their entirety by reference to the particular document, the full text of which may contain qualifications of and exceptions to statements made herein.

This Official Statement is submitted in connection with the sale of the Series W Highway Bonds referred to herein and may not be reproduced or used, in whole or in part, for any other purpose. This Official Statement has been approved by the State, acting by and through the Treasurer, and its use and distribution for the purpose set forth above have been authorized by the State and the Treasurer.

The information and expressions of opinion herein are subject to change without notice. Neither the delivery of this Official Statement nor any sale made hereunder, under any circumstances, shall create any implication that there has been no change in the affairs of the State since the date hereof.

The Underwriters have provided the following sentence for inclusion in this Official Statement: The Underwriters have reviewed the information in this official statement pursuant to their responsibilities to investors under the federal securities laws, but the Underwriters do not guarantee the accuracy or completeness of such information.

The information approved and provided by the State in this Official Statement is the information relating to the particular subjects provided by the State or State agencies for the purpose of this Official Statement. Reliance for such purpose should not be placed on any other information publicly provided, in any format including electronic, by any State agency for other purposes, including general information provided to the public or to portions of the public.

This Official Statement contains statements that the State or the Treasurer believes may be "forward-looking statements." Words such as "plan," "estimate," "project," "budget," "anticipate," "expect," "intend," "believe" and similar terms are intended to identify forward-looking statements. The achievement of results or other expectations expressed or implied by such forward-looking statements involve known and unknown risks, uncertainties and other factors that are difficult to predict, may be beyond the control of the State or the Treasurer and could cause actual results, performance or achievements to be materially different from any results, performance or achievements expressed or implied by such forward-looking statements. The State and the Treasurer undertake no obligation, and do not plan, to issue any updates or revisions to any of the forward-looking statements in this Official Statement.

Upon issuance, the Series W Highway Bonds will not be registered under the Securities Act of 1933, as amended, or any state securities law and will not be listed on any stock or other securities exchange. Neither the Securities and Exchange Commission nor any other federal, state, municipal or other governmental entity or agency, except the Treasurer, will have passed upon the accuracy or adequacy of this Official Statement or approved the Series W Highway Bonds for sale.

In connection with the offering of the Series W Highway Bonds, the Underwriters may over-allot or effect transactions which stabilize or maintain the market price of the Series W Highway Bonds at a level above that which might otherwise prevail in the open market. Such stabilizing, if commenced, may be discontinued at any time.

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SELECTED SUMMARY STATEMENT

$68,045,000
STATE OF OHIO
General Obligation Highway Capital
Improvements Bonds
Series W
(Full Faith and Credit/Highway User Receipts)

The following summary supplements certain of the information on the cover page and summarizes selected other information in this Official Statement relating to the General Obligation Highway Capital Improvements Bonds, Series W (the "Series W Highway Bonds" or alternately the "Highway Bonds") of the State of Ohio (the "State"). It is not intended as a substitute for the more detailed discussions in this Official Statement, to which reference should be made.

ISSUER. The State, by the State Treasurer of Ohio (the "Treasurer").

AUTHORIZATION. The Series W Highway Bonds, which are authorized and issued on behalf of the State by the Treasurer, are the twenty-third series of bonds (collectively, the "Highway Obligations") issued pursuant to Section 2m of Article VIII, Ohio Constitution, and are being issued under Ohio Revised Code Sections 151.01 and 151.06.

SECURITY AND SOURCES OF PAYMENT. The Series W Highway Bonds are general obligations of the State. Principal of and interest on the Series W Highway Bonds are payable from and secured by a pledge of the full faith and credit, revenue and taxing power (excluding net State lottery proceeds) of the State, and fees, excises and license taxes levied by the State relating to registration, operation or use of vehicles on public highways, or to fuels used for propelling such vehicles. As long as the Series W Highway Bonds are outstanding, the State has covenanted that the State shall maintain statutory authority for and cause to be levied, collected and applied sufficient pledged excises, taxes, and revenues of the State so that the revenues shall be sufficient in amounts to pay debt service when due of the Highway Obligations, including the Series W Highway Bonds.

PURPOSE. The Series W Highway Bonds are being issued to pay costs of highway capital improvements, and to pay costs of issuing the Series W Highway Bonds.

OPTIONAL REDEMPTION. The Series W Highway Bonds maturing on or after May 1, 2031, are subject to optional redemption on any date on or after May 1, 2030, in whole or in part, at 100% of the principal amount thereof, plus accrued interest to the redemption date.

FORM AND MANNER OF MAKING PAYMENTS. The Series W Highway Bonds will be initially issued as one fully registered bond for each interest rate within a maturity, under a book entry system and registered in the name of Cede & Co. as nominee of The Depository Trust Company, New York, New York ("DTC"). There will be no physical distribution of Highway Bonds to the ultimate purchasers. Highway Bonds in certificated form as such will not be transferable or exchangeable, except for transfer to another nominee of DTC or as otherwise described in this Official Statement.

Principal and interest will be payable to the registered owner. The principal of the Series W Highway Bonds will be payable on May 1 during the years listed on the inside front cover upon presentation and surrender at the office of the Bond Registrar. Interest will be transmitted by the Bond Registrar on each interest payment date (May 1 and November 1, beginning November 1, 2020) to the registered owner as of the 15th day of the month preceding the interest payment date.

TAX MATTERS. In the opinion of Bricker & Eckler LLP, Bond Counsel, under existing law (i) assuming compliance with certain covenants and the accuracy of certain representations, interest on the Series W Highway Bonds is excluded from gross income for federal income tax purposes and is not an item of tax preference for purposes of the federal alternative minimum tax under the Internal Revenue Code of 1986, as amended and (ii) interest on, and any profit made on the sale, exchange or other disposition of, the Series W Highway Bonds are exempt from all Ohio state and local taxation, except the estate tax, the domestic insurance company tax, the dealers in intangibles tax, the tax levied on the basis of the total equity capital of financial institutions, and the net worth base of the corporate franchise tax. **(For a more complete discussion of the tax aspects, see "TAX MATTERS" herein).**

BOND REGISTRAR. The Treasurer.

BOND COUNSEL. Bricker & Eckler LLP.

UNDERWRITERS. RBC Capital Markets, LLC, as representative of the Underwriters shown on the cover (collectively, the "Underwriters"). The Series W Highway Bonds have been purchased by the Underwriters at a price of $85,211,756.16.

MUNICIPAL ADVISOR. PFM Financial Advisors LLC.

Questions regarding this Official Statement or the Series W Highway Bonds should be directed to the Office of Debt Management, State Treasurer of Ohio, 30 East Broad Street, 9th Floor, Columbus, Ohio 43215-3461 (telephone 614-466-6903). For additional information concerning the Treasurer and the Treasurer's bond programs, visit www.ohiotreasurerbonds.com. The information contained on that website is not incorporated as part of this Official Statement.

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INTRODUCTION

This Official Statement has been prepared by the State, acting by and through the Treasurer, to provide certain information in connection with the original issuance and sale of the General Obligation Highway Capital Improvements Bonds, Series W (the "Series W Highway Bonds" or alternately the "Highway Bonds"). The Series W Highway Bonds are to be issued for the purpose of (i) paying costs of highway capital improvements, and (ii) paying costs of the issuance of the Series W Highway Bonds.

All financial and other information presented in this Official Statement has been provided by the State from its official records, except for information expressly attributed to other sources. The presentation of information, including tables of receipts from taxes and other sources, is intended to show recent historical information and is not intended to indicate future or continuing trends in the financial or other positions of the State. No representation is made that financial and other historical data will be the same in the future.

Reference to provisions of Ohio law, whether codified in the Ohio Revised Code or uncodified, or of the Ohio Constitution, are to those provisions as now in effect. Those provisions may from time to time be amended, repealed or supplemented.

As used in this Official Statement, "Fiscal Year" means the State's Fiscal Year, currently the twelve-month period from July 1 through June 30.

THE SERIES W HIGHWAY BONDS

General

The Series W Highway Bonds will be issued pursuant to the Ohio Constitution, Ohio Revised Code Sections 151.01 and 151.06 (the "Act"), and the Series W Bond Order issued by the Treasurer on June 4, 2020 (the "Highway Bond Order").

The Series W Highway Bonds will be initially issued as one fully registered bond for each interest rate within a maturity under a book-entry system (see **THE SERIES W HIGHWAY BONDS — Registration, Payment and Transfer** and **APPENDIX B — BOOK-ENTRY SYSTEM; DTC),** will be dated the date of their issuance, will be issued in denominations of $5,000 or any multiple of $5,000 in excess thereof, and will bear interest at the rates per annum and mature as set forth on the inside front cover of this Official Statement. Interest will be computed on the basis of a 360-day year consisting of twelve 30-day months.

The Treasurer will initially serve as the authenticating agent, bond registrar and paying agent for the Series W Highway Bonds (the "Bond Registrar"), and the Highway Bond Order provide that the Treasurer may designate a successor Bond Registrar.

The principal of the Series W Highway Bonds will be payable to the holder upon presentation and surrender at the principal office of the Bond Registrar.

Interest on the Series W Highway Bonds will be payable by the Bond Registrar by check or draft, mailed on each May 1 and November 1 (each an "Interest Payment Date"), beginning November 1, 2020, to the holder of record on the Register as of the 15th day of the month next preceding the Interest Payment Date. The Series W Highway Bonds are issuable in the form and denominations, and will be dated and mature, as described in this Official Statement. So long as the Series W Highway Bonds are immobilized in the custody of a depository pursuant to a book-entry system, interest on the Highway Obligations may be paid by wire transfer to the depository on each Interest Payment Date.

The Treasurer as Bond Registrar will be responsible for the payment of the principal and interest on the Series W Highway Bonds (the "Bond Service Charges"). The Bond Registrar will maintain and keep at his principal office all books and records necessary for the registration, exchange, transfer and authentication of the Series W Highway Bonds.

Optional Redemption of Series W Highway Bonds

The Series W Highway Bonds maturing on or after May 1, 2031 are subject to optional redemption on any date on or after May 1, 2030, in whole or in part, at 100% of the principal amount thereof, plus accrued interest to the redemption date.

Selection of Series W Highway Bonds to be Redeemed

If fewer than all outstanding Series W Highway Bonds are called for optional redemption at one time, the maturity or maturities of those Series W Highway Bonds to be called (in denominations of $5,000 or whole multiples of $5,000) will be selected by, and in a manner determined by, the Treasurer.

If less than all of the outstanding Series W Highway Bonds of one maturity and interest rate held under a book-entry system are to be called for redemption, the Bond Registrar will give notice of redemption only to DTC as registered owner. The selection of the book-entry interests in such Series W Highway Bonds to be redeemed, and notice of call to the owners of those interests called, is the sole responsibility of DTC and its Direct Participants and those working through those Direct Participants.

If there is to be a partial redemption when Series W Highway Bonds of denominations greater than $5,000 are then outstanding, each $5,000 unit of principal will be treated by the Bond Registrar as if it were a separate bond of the denomination of $5,000.

Notice of Redemption; Effect

The Bond Registrar (initially the Treasurer) is to cause notice of the call for redemption, identifying the Series W Highway Bonds or portions of Series W Highway Bonds to be redeemed, to be sent by first class mail, at least thirty (30) days prior to the redemption date, to the registered owner of each Series W Highway Bond to be redeemed at the address shown on the register on the 15th day preceding that mailing. Any defect in the notice or any failure to receive notice by mailing will not affect the validity of any proceedings for the redemption of Series W Highway Bonds. On the date designated for redemption, the Series W Highway Bonds or portions of the Series W Highway Bonds called for redemption shall become due and payable. If the Bond Registrar then holds sufficient moneys for payment of debt charges payable on that redemption date, interest on each Series W Highway Bond (or portion of a Series W Highway Bond) so called for redemption will cease to accrue on that date. So long as all Series W Highway Bonds are held under a book-entry system by a depository (DTC), the call notice is to be sent by the Bond Registrar only to the depository (i.e., DTC) or its nominee. Selection of book-entry interests in the Series W Highway Bonds called, and giving notice of the call to the owners of those interests called, is the sole responsibility of the depository. Any failure of the depository to advise any book-entry interest owners of any such notice and in its content or effect will not affect the validity of any proceedings for the redemption of any Series W Highway Bonds or portions of Series W Highway Bonds. (See **APPENDIX B —BOOK ENTRY SYSTEM; DTC.)**

Registration, Payment and Transfer

The Series W Highway Bonds will be issued and issuable only as one fully registered bond for each maturity bearing the same interest rate in the name of Cede & Co., as nominee for The Depository Trust Company ("DTC"), New York, New York, as holder of all the Series W Highway Bonds. The fully registered Highway Bonds will be retained and immobilized in the custody of DTC. For discussion of the book-entry system and DTC, see **APPENDIX B — BOOK-ENTRY SYSTEM; DTC.** DTC (or any successor securities depository), or its nominee, for all purposes under the Highway Bond proceedings (except the Continuing Disclosure Commitments under which others as well as DTC may be considered an owner or holder of the Series W Highway Bonds, see **CONTINUING DISCLOSURE COMMITMENT),** will be and will be considered by the Treasurer and the Bond Registrar to be the owner or holder of the Series W Highway Bonds. The Series W Highway Bonds will be initially issued in denominations of $5,000 or any multiple of $5,000 in excess thereof.

Revision of Book-Entry System; Replacement Highway Bonds

The proceedings for the Series W Highway Bonds provide for issuance of fully-registered Highway Bonds (the "Replacement Highway Bonds") directly to owners of Highway Bonds other than DTC only in the event that DTC (or a successor securities depository) determines not to continue to act as securities depository for the Series W Highway Bonds. Upon occurrence of this event, the Treasurer may in its discretion attempt to have established a securities depository book-entry relationship with another securities depository. If the Treasurer does not do so, or is unable to do so, and after the Bond Registrar has made provision for notification of the Beneficial Owners of the Series W Highway Bonds by appropriate notice to DTC, the Treasurer and the Bond Registrar will authenticate and deliver Replacement Highway Bonds of any one maturity, in authorized denominations, to or at the direction of any persons requesting such issuance, and, if the event is not the result of the Treasurer's action or inaction, at the expense (including legal and other costs) of those requesting.

Bond Service Charges on Replacement Highway Bonds will be payable when due without deduction for the services of the Bond Registrar as paying agent. Principal of and any premium on Replacement Highway Bonds, will be payable when due to the registered owner upon presentation and surrender to the Bond Registrar. Interest on Replacement Highway Bonds will be payable on the interest payment date by the Bond Registrar by transmittal to the registered owner of record on the Register as of the 15th day of the calendar month preceding the interest payment date. Replacement Highway Bonds will be exchangeable for other Replacement Highway Bonds of authorized denominations, and transferable, at the designated corporate trust office of the Bond Registrar without charge (except taxes or governmental fees). Exchange or transfer of then-redeemable Replacement Highway Bonds is not required to be made: (i) between the 15th day preceding the mailing of notice of redemption of Replacement Highway Bonds and the date of that mailing, or (ii) of a particular Replacement Highway Bond selected for redemption (in whole or part).

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PURPOSE AND APPLICATION OF PROCEEDS

The Series W Highway Bonds are to be issued for the purpose of (i) paying costs of highway capital improvements, and (ii) paying certain costs of issuance of the Series W Highway Bonds.

Sources and Uses of Funds

The proceeds of the Series W Highway Bonds will be applied for the following uses and in the respective estimated amounts:

	Series W Highway Bonds
Sources of Funds:	
Par Amount of Series W Highway Bonds	$68,045,000.00
Original Issue Premium	17,483,799.60
Total Sources of Funds	$85,528,799.60
Uses of Funds:	
Deposit to Highway Capital Improvement Fund	$85,000,000.00
Costs of Issuance[1]	528,799.60
Total Uses of Funds	$85,528,799.60

1. *Includes Underwriters' discount, Municipal Advisor fees, certain legal fees, printing costs and other costs of issuance of the Series W Highway Bonds.*

THE HIGHWAY OBLIGATIONS GENERALLY

Constitutional and Statutory Authorization

Constitutional Authorization. Section 2m of Article VIII, Ohio Constitution, adopted by the electors on November 7, 1995, is the constitutional authority for the issuance of Highway Obligations, including the Series W Highway Bonds. Section 2m provides that the General Assembly may provide by law for the issuance of tax-supported Highway Obligations the holders of which are given the right to have excises and taxes levied by the General Assembly for the payment of the Bond Service Charges thereon. Section 2m further provides that moneys referred to in Section 5a of Article XII of the Ohio Constitution (being "Highway User Receipts" as defined and described below, see **THE HIGHWAY OBLIGATIONS GENERALLY — Sources of Payment — Pledged Excises and Taxes; Covenant)** may be pledged to the payment of debt service on Highway Obligations. Section 2m further provides that such Highway Obligations shall be incurred for the purpose of financing or assisting in the financing of the cost of highway capital improvements of the State. Outstanding series of Highway Obligations, the Series W Highway Bonds and any subsequently issued Highway Obligations have been, are and will be issued pursuant to this constitutional authorization and implementing legislation. Section 2m further provides that not more than $220,000,000 principal amount of Highway Obligations, plus the principal amount of Highway Obligations that in any prior Fiscal Years could have been but were not issued within the $220,000,000 Fiscal Year limit, may be issued in any Fiscal Year pursuant to Section 2m and that the total principal amount of Highway Obligations outstanding under Section 2m may not exceed $1,200,000,000; provided, however, that the principal amount of Highway Obligations issued to retire or refund Highway Obligations previously issued shall not be counted against the Fiscal Year or total issuance limitations to the extent that such principal amount does not exceed the principal amount of Highway Obligations to be refunded.

Section 2m further provides that each series of Highway Obligations issued under Section 2m must mature in not more than 30 years from the date of issuance, or, if issued to retire or refund Highway Obligations previously issued under Section 2m, within 30 years from the date the Highway Obligations to be retired or refunded were originally contracted.

Statutory Authorization. The General Assembly implemented Section 2m of Article VIII, Ohio Constitution, by enacting the Act, and, from time to time, the General Assembly enacts laws authorizing the issuance of Highway Obligations and appropriating the proceeds for purposes for which those Highway Obligations may be issued. The Act authorizes the Treasurer, on behalf of the State, to issue the Highway Obligations authorized by the General Assembly.

The Act provides that the net proceeds of Highway Obligations (including the Series W Highway Bonds) are to be deposited in the Highway Capital Improvement Fund, created by Ohio Revised Code Section 5528.53 (the "Highway Capital Improvement Fund") (See PURPOSE AND APPLICATION OF PROCEEDS). The Highway Capital Improvement Fund, and the moneys in it, are not pledged to the payment of Bond Service Charges on the Highway Obligations.

The General Assembly has authorized the issuance of Highway Obligations pursuant to Section 2m of Article VIII in an aggregate principal amount not to exceed $57,000,000 in the 2020-2021 biennium, plus any carry-over in amounts authorized but not issued in prior Fiscal Years, the net proceeds of which are to be deposited in the Highway Capital Improvement Fund. In total, the General Assembly has authorized $3,740,000,000 of Highway Obligations, of which and excluding the Series W Highway Bonds, $3,312,955,000 has heretofore been issued, leaving a remaining statutory authorization of $427,045,000, all subject to the constitutional limitation that not more than $1,200,000,000 original principal amount of such obligations may be outstanding at any one time. The principal amount of Highway Obligations currently outstanding is $934,960,000. The Treasurer has determined that, based on a certification of the Director of Transportation of the State, the Series W Highway Bonds must be issued in a principal amount of approximately $68,045,000 in order to assure sufficient moneys to the credit of the Highway Capital Improvement Fund to pay expected costs of highway capital improvements. Finally, pursuant to the Series W Bond Order, the Treasurer has authorized the issuance of the Series W Highway Bonds in the aggregate principal amount of $68,045,000 for the purpose of making a deposit in the Highway Capital Improvement Fund. Upon issuance of the Series W Highway Bonds, $1,003,005,000 of Highway Obligations will be outstanding.

The Highway Capital Improvements Program

The proceeds of the Series W Highway Bonds and other moneys from time to time in the Highway Capital Improvement Fund (including proceeds of other Highway Obligations) will be used to pay costs of highway capital improvements authorized by the General Assembly.

Specifically, proceeds of Highway Obligations are issued for the purpose of paying costs of construction, reconstruction, or other improvements of highways, including those on the state highway system and urban extensions thereof, those within or leading to public parks or recreation areas and those within or leading to municipal corporations and shall include, without limitation, the cost of acquisition, construction, reconstruction, expansion, improvement, planning and equipping thereof.

The Series W Highway Bonds are the twenty-third series of Highway Obligations issued pursuant to Section 2m of Article VIII, Ohio Constitution. After the issuance of the Series W Highway Bonds, $3,381,000,000 of new money Highway Obligations will have been issued pursuant to Section 2m of Article VIII, Ohio Constitution. Additional Highway Obligations are expected to be issued from time to time.

Sources of Payment

The Series W Highway Bonds are general obligations of the State. The full faith and credit, revenue, and taxing power of the State and the Highway User Receipts, all as described below, are pledged to the timely payment of Bond Service Charges. Payment of Bond Service Charges is not dependent on, or subject or related in any manner to, progress on or the completion or operation of projects financed by the Series W Highway Bonds.

Pledged Excises and Taxes; Covenant. Bond Service Charges are payable from and secured by (i) the pledge by the General Assembly of the full faith and credit, revenue and taxing power of the State (except for net State lottery proceeds), (ii) a pledge of all fees, excises, or license taxes relating to the registration, operation, or use of vehicles on the public highways or to fuels used for propelling those vehicles, but excluding statutory refunds and adjustments ("Highway User Receipts"), and (iii) moneys deposited in the State Highway Capital Improvement Bond Service Fund (the "Bond Service Fund") and the respective Cost of Issuance Funds (see **PURPOSE AND APPLICATION OF PROCEEDS**), including all accounts in those funds and all moneys deposited therein and the investment earnings thereon (collectively, and subject to the stated exceptions, the "Pledged Excises and Taxes"). The Act covenants that so long as any of the Highway Obligations are outstanding, the State and applicable officers and governmental agencies of the State, including the General Assembly, shall maintain statutory authority for and cause to be levied, collected and applied sufficient pledged excises, taxes, and revenues of the State in amounts sufficient to pay the Bond Service Charges when due. The Pledged Excises and Taxes exclude 50% of the State income, estate and inheritance tax receipts which, pursuant to Section 9 of Article XII of the Ohio Constitution, must be returned to the county, school district, city, village or township in which such taxes originate. Additionally, Section 2 of Article XII of the Ohio Constitution limits the amount of the aggregate levy for all State and local purposes of ad valorem property taxes, without a vote of the electors or municipal charter provision, to 1% of the property's true value in money, and Ohio Revised Code Section 5705.02 further limits the amount of such aggregate levy to 1% of the property's tax valuation (presently 35% of its true or "market" value). The State itself currently does not levy any ad valorem taxes on real or tangible personal property.

Otherwise, the Pledged Excises and Taxes are unlimited as to amount to the extent required to pay the Bond Service Charges.

Substitution of Fees, Excises and Taxes. The General Assembly may from time to time repeal or reduce any excise, tax, or other source of revenue pledged to the payment of Bond Service Charges, and may levy any new or increased excise, tax, or revenue source to meet the pledge of the State's full faith and credit, revenue, and taxing power to the payment of debt service on outstanding obligations. However, the General Assembly cannot impair the State's obligation to levy, charge, and collect sufficient pledged excises, taxes, and revenues to pay debt service on such obligations.

No Diversion of Highway User Receipts. Section 5a of Article XII, Ohio Constitution, prohibits the use of Highway User Receipts for other than the costs of administration of the laws levying such taxes; statutory refunds and adjustments; payments of Highway Obligations; construction, reconstruction, maintenance and repair of public highways and bridges and other statutory highway purposes; traffic enforcement by the State; and hospitalization of indigent persons injured in motor vehicle accidents on the public highways. Highway User Receipts are not and cannot be used, or pledged to the payment of bonds or any other obligations issued, for any other purpose.

Segregation of Highway User Receipts from General Revenue Fund of the State. Highway User Receipts are segregated from the operating funds of the State, including from the time of their collection through their deposit in the Bond Service Fund in September through February. (See **THE HIGHWAY OBLIGATIONS GENERALLY — Sources of Payment — Highway Capital Improvement Bond Service Fund — Pledge**).

History of Highway User Receipts and Debt Service Coverage. The following table sets forth revenues of the State of Ohio from fees, excises and license taxes levied by the State relating to registration, operation, or use of vehicles on public highways, or to fuels used for propelling such vehicles (collectively, the Highway User Receipts) available in recent State Fiscal Years and pledged to and budgeted for the payment of debt service on general obligation Highway Capital Improvement Bonds (the General Obligation Highway Bonds), and applies historical and current program debt service against available Highway User Receipts to derive coverage ratios for State Fiscal Years 2010 through and including 2019.

Fiscal Year	Highway User Receipts Available for Debt Service Requirements[1]	Total Fiscal Year Debt Service	Coverage Ratio
2010	$2,585,478,680	$170,263,970	15.19
2011	2,642,695,324	149,309,580	17.70
2012	2,593,933,652[2]	140,859,293	18.42
2013	2,726,651,064[3]	135,452,052	20.13
2014	2,835,136,025[3]	132,542,874	21.39
2015	2,860,617,590[3]	140,205,176	20.40
2016	2,857,781,052[3]	119,839,303	23.85
2017	2,904,212,443[3]	127,398,654	22.80
2018	2,934,584,484[3]	114,603,341	25.61
2019	3,053,936,088[3]	137,224,235	22.26

[1] Reflects total Highway User Receipts minus permissible statutory deductions or refunds.

[2] The annual decrease in Highway User Receipts in Fiscal Year 2012 was due in large part to the timing of motor fuel tax receipts that were received at the end of that Fiscal Year but not recorded until the following Fiscal Year.

[3] Fiscal Years 2013 through 2019 include $75.6 million, $81.1 million, $94.8 million, $72.2 million, $56.3 million, $66.1 million and $84.0 million, respectively, of commercial activity and/or petroleum activity tax receipts attributable to sales of motor fuel in the State of Ohio that beginning December 7, 2012 are required to be expended on public highways.

Based on the most recent annual data (Fiscal Year 2019), approximately 67% of Highway User Receipts are generated by motor fuel and use taxes while the remaining 33% is primarily from registration and license fees. The motor vehicle fuel tax was raised by 10.5 cents per gallon effective July 1, 2019 to 38.5 cents per gallon. As with all historical information, past performance is not a guarantee of future results. In particular, the State anticipates that the collection of the portion of Highway User Receipts consisting of motor fuel and use taxes for Fiscal Year 2020 will be adversely affected as a result of reduced motor vehicle usage in response to the COVID-19 pandemic. The State is unable to predict the degree of any such effect.

The State, acting pursuant to Section 2i of Article VIII of the Ohio Constitution and acts of the General Assembly, has issued and may issue in the future, special obligations for State Department of Transportation and Department of Public Safety facilities. The State has also issued special obligations and committed to provide "availability payments" in support of certain State highway improvement projects and may in the future issue additional special obligations and enter into commitments to provide additional availability payments for other State highway improvement projects. Annual bond service charges on these special obligations and those availability payments may be paid from Highway User Receipts remaining *after* payment of bond service charges on the General Obligation Highway Bonds, but these special obligations or payments are not and will not be secured by a pledge of the full faith and credit, revenue or taxing power of the State, and their owners or recipients will have no right to have taxes or excises levied by the General Assembly for their payment.

Highway Capital Improvement Bond Service Fund — Pledge. The Bond Service Fund has been established pursuant to Ohio Revised Code Section 151.06 as a trust fund in the State Treasury pledged to the payment of Bond Service Charges on all Highway Obligations (including the Series W Highway Bonds). The Act provides that moneys in the Bond Service Fund shall be disbursed on the order of the Treasurer; provided that no further order is required for the payment of Bond Service Charges on the Highway Obligations (including the Series W Highway Bonds) when due.

The Act further provides that a sufficient amount of moneys of the State is committed and, without necessity for further appropriation, shall be paid into the Bond Service Fund for the purpose of paying when due the Bond Service Charges on the Highway Obligations (including the Series W Highway Bonds). The Act requires the Treasurer, by July 15 of each Fiscal Year, to certify or cause to be certified to the Office of Budget and Management of the State ("OBM") the total amount of moneys required during that Fiscal Year to meet in full all Bond Service Charges on outstanding Highway Obligations that are not payable from the proceeds of refunding or renewal obligations. The Treasurer is also required to make supplemental certifications to OBM for each date Bond Service Charges are due and at such other times during each Fiscal Year as may be provided in the bond proceedings or requested by OBM. Pursuant to current State law, moneys from Highway User Receipts are required to be deposited in the Bond Service Fund in September through February in monthly amounts equal to one-sixth of the certified annual amount of Bond Service Charges on Highway Obligations. If on the 10th calendar day prior to their due date, moneys to the credit of the Bond Service Fund are insufficient to meet in full all payments of Bond Service Charges on that due date, no fewer than eight days before that due date, OBM is to transfer to that Bond Service Fund from the Pledged Excises and Taxes sufficient revenues to pay those Bond Service Charges when due.

Moneys to the credit of the Bond Service Fund may be invested in notes, bonds or other direct obligations of the United States or of any agency or instrumentality of the United States, or in no-front-end-load money market mutual funds consisting exclusively of those obligations, or in repurchase agreements (including those issued by any fiduciary) secured by those obligations, or in collective investment funds consisting exclusively of those obligations; obligations of the State or any political subdivision of the State; certificates of deposit of any national bank located in Ohio and any State bank subject to inspection by the State superintendent of financial institutions; or the Treasurer's pooled investment program. The income from those investments is to be credited to the Bond Service Fund.

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Bond Debt Service Requirements

The following table sets forth the annual debt service requirements (rounded) on a Fiscal Year basis for (i) the Series W Highway Bonds, (ii) other outstanding Highway Obligations, and (iii) total outstanding Highway Obligations, all as of the date of this Official Statement.

Fiscal Year	Series W Highway Bonds Debt Service			Outstanding Highway Obligations Debt Service			Total Highway Obligations Debt Service		
	Principal	Interest	Total	Principal	Interest	Total	Principal	Interest	Total
2021	3,980,000	2,724,448	6,704,448	104,450,000	45,293,692	149,743,692	108,430,000	48,018,140	156,448,140
2022	4,580,000	2,974,350	7,554,350	105,590,000	40,494,052	146,084,052	110,170,000	43,468,402	153,638,402
2023	4,580,000	2,791,150	7,371,150	106,095,000	35,493,556	141,588,556	110,675,000	38,284,706	148,959,706
2024	4,580,000	2,607,950	7,187,950	107,715,000	30,384,277	138,099,277	112,295,000	32,992,227	145,287,227
2025	4,575,000	2,424,750	6,999,750	94,725,000	25,178,395	119,903,395	99,300,000	27,603,145	126,903,145
2026	4,575,000	2,241,750	6,816,750	69,795,000	20,456,300	90,251,300	74,370,000	22,698,050	97,068,050
2027	4,575,000	2,058,750	6,633,750	70,390,000	16,966,550	87,356,550	74,965,000	19,025,300	93,990,300
2028	4,575,000	1,830,000	6,405,000	71,015,000	13,447,050	84,462,050	75,590,000	15,277,050	90,867,050
2029	4,575,000	1,601,250	6,176,250	57,905,000	9,896,300	67,801,300	62,480,000	11,497,550	73,977,550
2030	4,575,000	1,372,500	5,947,500	41,305,000	7,364,000	48,669,000	45,880,000	8,736,500	54,616,500
2031	4,575,000	1,143,750	5,718,750	41,300,000	5,298,750	46,598,750	45,875,000	6,442,500	52,317,500
2032	4,575,000	915,000	5,490,000	26,100,000	3,233,750	29,333,750	30,675,000	4,148,750	34,823,750
2033	4,575,000	686,250	5,261,250	26,100,000	1,928,750	28,028,750	30,675,000	2,615,000	33,290,000
2034	4,575,000	457,500	5,032,500	12,475,000	623,750	13,098,750	17,050,000	1,081,250	18,131,250
2035	4,575,000	228,750	4,803,705	0	0	0	4,575,000	228,750	4,803,750
Total	**$68,045,000**	**$26,058,148**	**$94,103,148**	**$934,960,000**	**$256,059,172**	**$1,191,019,172**	**$1,003,005,000**	**$282,117,319**	**$1,285,122,319**

DEFEASANCE

The Series W Highway Bonds will be deemed to have been paid or caused to be paid and no longer deemed outstanding if there is held in trust, by the Bond Register or the Bond Register's agent, for and irrevocably committed to the purpose either or a combination of the following: moneys or direct obligations of or obligations guaranteed as to payment of principal and interest by the United States or senior debt obligations of the U.S. government-sponsored enterprises rated on the date of purchase in the highest category for short-term or long-term debt as, applicable, by any two nationally recognized rating organizations, verified by an independent public accounting firm of national reputation (or equivalent expert) to be of such maturities and interest payment dates and to bear such interest or other investment income as will be, without further investment or reinvestment of either the principal or the investment earnings (likewise to be held in trust and committed, except as described below) sufficient for the payment at and to maturity or redemption of all applicable Bond Service Charges.

Any moneys held in cash may be invested only in direct obligations of the United States, any obligations guaranteed as to principal and interest by the United States, the maturities or redemption (at the holder's option) dates of which will coincide as nearly as practicable with, but will not be later than, the times at which those moneys will be required for those payment purposes.

Any income or interest earned by, or increment to, those investments, to the extent not required for those payment purposes, may be transferred to the applicable bond service fund or the State's General Revenue Fund.

INVESTMENT CONSIDERATIONS

Coronavirus (COVID-19)

Investment in the Series W Highway Bonds involves certain risks, among them, the economic effect of measures taken to limit the spread of COVID-19, a new strain of coronavirus that can result in severe respiratory disease. The worldwide spread of COVID-19 is considered a Public Health Emergency of International Concern by the World Health Organization. The spread of COVID-19 has led to quarantine and other "social distancing" measures in affected areas, including the State of Ohio, undertaken by governmental agencies, businesses, schools and other entities. These measures have included actions taken by Governor DeWine and the Director of the Ohio Department of Health to declare a state of emergency in the State and to limit non-essential travel, promote telecommuting, limit public gatherings, close non-essential businesses, and issue stay-at-home orders. Re-opening of the State is being phased in under the Responsible Restart Ohio Plan that began with a "Stay Safe Ohio Order" issued by the Governor on May 1, 2020. Future State legislation may be enacted and/or Executive Orders issued as the situation continues to evolve.

Financial markets have reacted with significant volatility as a result of the outbreak of COVID-19. The spread of the virus is expected to adversely impact local, state and national economies, which impact, while currently unknown, could adversely affect retail sales and other economic activity in the State of Ohio which could, in turn, adversely affect the amount of the tax receipts and Highway User Receipts received by the State. Due to the unprecedented nature of the COVID-19 outbreak and the subsequent measures taken to contain its spread, and the uncertainty as to the duration of those measures, there is no way to predict with any degree of certainty the extent COVID-19 will impact the federal or State economy, or the tax receipts and Highway User Receipts received by the State.

In summary, the State is unable to predict (i) the extent or duration of the COVID-19 pandemic, (ii) the extent or duration of existing and future quarantines, travel restrictions, business closures and other measures related to the COVID-19 pandemic, and (iii) whether and to what extent the COVID-19 pandemic may disrupt the local and global economy, manufacturing or supply chain or whether any such disruption may materially adversely affect the amount of tax receipts or Highway User Receipts or the operations of the State. Given the evolving nature of the spread of the disease and the response of governments, business and individuals to COVID-19, the State is unable to accurately predict the magnitude of the impact of COVID19 on the State, the tax receipts or the Highway User Receipts, and the financial condition of the State. See **APPENDIX A – Recent and Current Finances – Outbreak of Covid-19** for a more complete discussion.

Federal Legislation

On March 27, 2020, Congress passed, and President Trump signed into law, the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act"), an economic stimulus package in response to the disruption of businesses, financial markets, and employment due to the Coronavirus. The CARES Act expands unemployment insurance benefits, implements certain aid to small businesses, provides tax credits or rebates for individual taxpayers, increases certain charitable contributions, waives certain early withdrawal penalties on retirement account distributions for taxpayers with coronavirus related challenges, excludes from taxable income certain employer payments of student loans, provides for a variety of business tax stimuli including, but not limited to, an extension for carry-backs of certain net operating losses, the elimination of certain net operating loss caps, and the adjustment of tax credit carry-forwards, adds various health provisions to address the coronavirus crisis, provides a $150 billion Coronavirus Relief Fund for state and city government expenditures incurred due to the coronavirus public health emergency as allocated by population proportions with a minimum of $1.25 billion for each state, and provides $454 billion in emergency lending provisions to businesses, states, and cities throughout the United States to be overseen by a Congressional Oversight Commission and a Special Inspector General. Additional legislation is currently being proposed in Congress to supplement, amend, and/or clarify the CARES Act, and future federal legislation may be enacted as the situation continues to evolve.

INVESTORS SHOULD CONTINUE TO MONITOR ONGOING DEVELOPMENTS AND CONSULT THEIR PERSONAL FINANCIAL AND LEGAL ADVISORS.

TAX MATTERS

General

In the opinion of Bricker & Eckler LLP, Bond Counsel, under existing law: (i) interest on the Series W Highway Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986, as amended (the "Code"), and is not an item of tax preference for purposes of the federal alternative minimum tax imposed on individuals; and (ii) interest on, and any profit made on the sale, exchange or other disposition of, the Series W Highway Bonds are exempt from all Ohio state and local taxation, except the estate tax, the domestic insurance company tax, the dealers in intangibles tax, the tax levied on the basis of the total equity capital of financial institutions, and the net worth base of the corporate franchise tax. Bond Counsel will express no opinion as to any other tax consequences regarding the Series W Highway Bonds.

The opinion on tax matters will be based on and will assume the accuracy of certain representations and certifications, and continuing compliance with certain covenants, of the State contained in the transcript of proceedings and that are intended to evidence and assure the foregoing, including that the Series W Highway Bonds are and will remain obligations the interest on which is excluded from gross income for federal income tax purposes. Bond Counsel will not independently verify the accuracy of these certifications and representations or the continuing compliance with these covenants.

The Code prescribes a number of qualifications and conditions for the interest on state and local government obligations to be and remain excluded from gross income for federal income tax purposes, some of which, including provisions for the rebate of certain investment earnings to the federal government, require future or continued compliance after issuance of the obligations in order for the interest to be and remain so excluded from the date of issuance. Noncompliance with these requirements could cause the interest to be included in gross income for federal income tax purposes and to be subject to federal income taxation retroactively to the date of issuance of the Series W Highway Bonds.

Interest on the Series W Highway Bonds may be subject to a federal branch profits tax imposed on certain foreign corporations doing business in the United States and to a federal tax imposed on excess net passive income of certain S corporations. Under the Code, the exclusion of interest from gross income for federal income tax purposes may have certain adverse federal income tax consequences on items of income, deduction or credit for certain taxpayers, including financial institutions, certain insurance companies, recipients of Social Security and Railroad Retirement benefits, those that are deemed to incur or continue indebtedness to acquire or carry tax-exempt obligations, and individuals otherwise eligible for the earned income tax credit. The applicability and extent of these and other tax consequences will depend upon the particular tax status or other tax items of the owner of the Series W Highway Bonds. Bond Counsel will express no opinion regarding those consequences.

Legislation affecting tax-exempt obligations is regularly considered by the United States Congress and may also be considered by the State legislature. Court proceedings may also be filed, the outcome of which could modify the tax treatment of obligations such as the Series W Highway Bonds. There can be no assurance that legislation enacted or proposed, or actions by a court, after the date of issuance of the Series W Highway Bonds will not have an adverse effect on the tax status of interest or other income on the Series W Highway Bonds or the market value or marketability of the Series W Highway Bonds. These adverse effects could result, for example, from changes to federal or state income tax rates, changes in the structure of federal or state income taxes (including replacement with another type of tax), or repeal (or reduction in the benefit) of the exclusion of interest on the Series W Highway Bonds from gross income for federal or state income tax purposes for all or certain taxpayers.

Prospective purchasers of the Series W Highway Bonds should consult with their own tax advisers regarding pending or proposed federal and state tax legislation and court proceedings, and prospective purchasers of the Series W Highway Bonds at other than their original issuance at the respective prices indicated on the inside cover of this Official Statement should also consult their own tax advisers regarding other tax considerations such as the consequences of market discount, as to all of which Bond Counsel expresses no opinion.

Bond Counsel's engagement with respect to the Series W Highway Bonds ends with the issuance of the Series W Highway Bonds, and, unless separately engaged, Bond Counsel is not obligated to defend the State or the owners of the Series W Highway Bonds regarding the tax status of interest thereon in the event of an audit examination by the IRS. The IRS has a program to audit tax-exempt obligations to determine whether the interest thereon is includible in gross income for federal income tax purposes. If the IRS does audit the Series W Highway Bonds, under current IRS procedures, the IRS will treat the State as the taxpayer and the beneficial owners of the Series W Highway Bonds will have only limited rights, if any, to obtain and participate in judicial review of such audit. Any action of the IRS, including but not limited to selection of the Series W Highway

Bonds for audit, or the course or result of such audit, or an audit of other obligations presenting similar tax issues, may affect the market value or marketability of the Series W Highway Bonds.

Original Issue Premium

All of the Series W Highway Bonds ("Premium Bonds") were sold to the public at a price in excess of their stated redemption price at maturity (the principal amount). That excess constitutes bond premium. For federal income tax purposes, bond premium is amortized over the period to maturity of a Premium Bond, based on the yield to maturity of that Premium Bond (or, in the case of a Premium Bond callable prior to its stated maturity, the amortization period and yield may be required to be determined on the basis of an earlier call date that results in the lowest yield on that Premium Bond), compounded semiannually. No portion of that bond premium is deductible by the owner of a Premium Bond. For purposes of determining the owner's gain or loss on the sale, redemption (including redemption at maturity) or other disposition of a Premium Bond, the owner's tax basis in the Premium Bond is reduced by the amount of bond premium that is amortized during the period of ownership. As a result, an owner may realize taxable gain for federal income tax purposes from the sale or other disposition of a Premium Bond for an amount equal to or less than the amount paid by the owner for that Premium Bond. A purchaser of a Premium Bond in the initial public offering at the price for that Premium Bond stated on the inside cover of this Official Statement who holds that Premium Bond to maturity (or, in the case of a callable Premium Bond, to its earlier call date that results in the lowest yield on that Premium Bond) will realize no gain or loss upon the retirement of that Premium Bond.

Owners of Premium Bonds should consult with their own tax advisers as to the determination for federal income tax purposes of the amount of bond premium properly accruable or amortizable in any period with respect to the Premium Bonds and as to other federal tax consequences and the treatment of bond premium for purposes of state and local taxes on, or based on, income.

LITIGATION

There is no litigation pending contesting the validity of the Series W Highway Bonds or the proceedings for their authorization, issuance, sale, execution and delivery. An opinion of the Attorney General of the State to the effect that, to the best of the knowledge of the Attorney General, no litigation is pending contesting the validity of the Series W Highway Bonds or the proceedings for the authorization, issuance, sale, execution and delivery thereof, will be delivered to the Underwriters at the time of original delivery of the Series W Highway Bonds.

The State is a party to various legal proceedings seeking damages or injunctive or other relief and generally incidental to its operations, but unrelated to the Series W Highway Bonds or the security for the Series W Highway Bonds. The ultimate disposition of these proceedings is not now determinable, but in the opinion of the Attorney General will not have a material adverse effect on the Series W Highway Bonds or the security for the Series W Highway Bonds.

LEGAL OPINIONS

Legal matters incident to the issuance of the Series W Highway Bonds and with regard to their tax-exempt status (see "**TAX MATTERS**") are subject to the legal opinions of Bricker & Eckler LLP, Bond Counsel. Signed legal opinions dated as of, and premised on the transcript of proceedings examined and the law in effect on, the date of original delivery of the Series W Highway Bonds will be delivered to the Underwriters at the time of that original delivery.

The proposed text of the legal opinion for the Series W Highway Bonds is included as **EXHIBIT A** hereto. Such opinion will speak only as of its date, and subsequent distribution of such opinion by recirculation of this Official Statement or otherwise shall create no implication that Bond Counsel has reviewed or expresses any opinion concerning any of the matters referred to in its opinion subsequent to the date of such opinion.

Certain legal matters will be passed upon for the Underwriters by their counsel, Shumaker, Loop & Kendrick, LLP.

RATINGS

In response to the Treasurer's application, the Series W Highway Bonds have been rated AA+ (stable outlook) by Fitch Ratings ("Fitch"), Aa1 (stable outlook) by Moody's Investors Service, Inc. ("Moody's"), AAA (stable outlook) by S&P Global Ratings ("S&P"), and AAA (stable outlook) by Kroll Bond Rating Agency, Inc. ("Kroll").

The ratings in effect from time to time reflect only the views of the rating organization. The explanation of its views of its rating's meaning and significance may be obtained from the respective rating agency. The State furnished to each rating agency certain information and materials relating to the Series W Highway Bonds, the State and the Treasurer, some of which may not be included in this Official Statement. Generally, rating agencies base their ratings on that information and materials, and on their own investigations, studies, and assumptions.

There can be no assurance that the ratings assigned will continue for any given time, or that a rating will not be lowered or withdrawn by a rating agency if in its judgment circumstances so warrant. Any downward change in or withdrawal of a rating, or change in rating outlook or other actions of a rating agency, may have an adverse effect on the marketability and market price of the Series W Highway Bonds.

UNDERWRITING

RBC Capital Markets, LLC, as representative of the Underwriters, has agreed in the Bond Purchase Agreement, subject to certain conditions, to purchase the Series W Highway Bonds from the State at the following price:

The Series W Highway Bonds at a price of $85,211,756.16 (consisting of the par amount thereof, plus original issue premium of $17,483,799.60, less underwriting discount of $317,043.44).

The Underwriters are obligated to purchase all the Series W Highway Bonds if any are purchased. The Series W Highway Bonds may be offered and sold by the Underwriters to certain dealers at prices lower than the public offering prices, and the public offering prices may be changed from time to time.

The Underwriter and its respective affiliates are full-service financial institutions engaged in various activities that may include securities trading, commercial and investment banking, municipal advisory, brokerage, and asset management. In the ordinary course of business, the Underwriter and its respective affiliates may actively trade debt and, if applicable, equity securities (or related derivative securities) and provide financial instruments (which may include bank loans, credit support or interest rate swaps). The Underwriter and its respective affiliates may engage in transactions for their own accounts involving the securities and instruments made the subject of this securities offering or other offering of the Issuer. The Underwriter and its respective affiliates may make a market in credit default swaps with respect to municipal securities in the future. The Underwriter and its respective affiliates may also communicate independent investment recommendations, market color or trading ideas and publish independent research views in respect of this securities offering or other offerings of the Issuer.

Piper Sandler & Co. ("Piper Sandler") has entered into a distribution agreement ("Distribution Agreement") with Charles Schwab & Co., Inc. ("CS&Co.") for the retail distribution of certain securities offerings at the original issue prices. Pursuant to the Distribution Agreement, CS&Co. will purchase the Series W Highway Bonds from Piper Sandler at the original issue price less a negotiated portion of the selling concession applicable to any Series W Highway Bonds that CS&Co. sells.

MUNICIPAL ADVISOR

PFM Financial Advisors LLC (the "Municipal Advisor") is serving as the municipal advisor to the Treasurer in connection with the issuance and sale of the Series W Highway Bonds. The Municipal Advisor is not obligated to undertake, and has not undertaken to make, an independent verification or to assume responsibility for the accuracy, completeness, or fairness of the information contained in the Official Statement. The Municipal Advisor is an independent advisory firm and is not engaged in the business of underwriting, trading or distributing municipal securities or other public securities.

TRANSCRIPT AND CLOSING CERTIFICATES

A complete transcript of proceedings and no-litigation certificate (as described above) will be delivered by the Treasurer when the Series W Highway Bonds are delivered to the original purchaser. At that time the Treasurer will furnish to the original purchaser a certificate relating to the accuracy and completeness of this Official Statement (including matters set forth in or contemplated by it).

CONTINUING DISCLOSURE COMMITMENT

The State, acting by and through the Treasurer and Director of OBM, has committed, for the benefit of the holders and Beneficial Owners of the Series W Highway Bonds, in accordance with SEC Rule 15c212 (the "Rule"), to provide or cause to be provided such financial information and operating data (the "Annual Information"), audited financial statements and notices, in such manner, as may be required for purposes of paragraph (b)(5)(i) of the Rule (the "Continuing Disclosure Commitment"), as described below.

The State will provide to the Municipal Securities Rulemaking Board (the "MSRB") through its Electronic Municipal Market Access ("EMMA") system:

- Annual Information for each State Fiscal Year (beginning with Fiscal Year 2020) not later than the 90th day following the end of the Fiscal Year (or, if that is not a State business day, the next State business day), consisting of annual financial information and operating data of the type included under the heading **THE HIGHWAY OBLIGATIONS GENERALLY —Sources of Payment — History of Highway User Receipts and Debt Service Coverage** and in **APPENDIX A** of this Official Statement under the captions **FISCAL MATTERS, STATE DEBT, STATE EMPLOYEES AND COLLECTIVE BARGAINING AGREEMENTS, RETIREMENT SYSTEMS** and **TAX LEVELS AND TAX BASES.** The Annual Information may be provided in part by cross-reference to other documents, such as the State's Comprehensive Annual Financial Report, and subsequent final official statements.

- When and if available, audited general purpose financial statements of the State for each Fiscal Year. The Treasurer expects that those financial statements will be prepared, that they will be available separately from the Annual Information, and that the accounting principles to be applied in their preparation will, except as may otherwise then be stated, be as described under and by reference in **APPENDIX A under FISCAL MATTERS — Accounts and Controls; Financial Reports.**

- Notice of the occurrence of any of the following events, within the meaning of the Rule, with respect to the Series W Highway Bonds, within 10 business days of the occurrence of the event:

(i) principal and interest payment delinquencies;

(ii) non-payment related defaults, if material;

(iii) unscheduled draws on any debt service reserves or on credit enhancements reflecting financial difficulties;

(iv) substitution of credit or liquidity providers, or their failure to perform;

(v) adverse tax opinions, the issuance by the IRS of proposed or final determinations of taxability, Notice of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Series W Highway Bonds, or other material events affecting the tax status of the Series W Highway Bonds;

(vi) modifications to rights of registered owners or Beneficial Owners, if material;

(vii) Highway Bond calls, if material, and tender offers;

(viii) defeasances;

(ix) release, substitution, or sale of property securing repayment of the Series W Highway Bonds, if material;

(x) rating changes;

(xi) bankruptcy, insolvency, receivership or similar event of the obligated person;

(xii) the consummation of a merger, consolidation or acquisition involving an obligated person or the sale of all or substantially all of the assets of the obligated person, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;

(xiii) appointment of a successor or additional trustee or the change of name of a trustee, if material;

(xiv) incurrence of a Financial Obligation of the obligated person, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a financial obligation of the obligated person, any of which affect security holders, if material; and

(xv) default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of the obligated person, any of which reflect financial difficulties.

For purposes of the Rule, a "Financial Obligation" means (a) a debt obligation, (b) a derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation, or (c) a guarantee of either clause (a) or (b) above. The term "financial obligation" shall not include municipal securities as to which a final official statement has been provided to the MSRB consistent with the Rule.

- Notice of the failure to provide the Annual Information within the specified time.

- Notice of any material change in the accounting principles applied in the preparation of the annual financial statements or in the Fiscal Year, any failure of the General Assembly to appropriate moneys for the purpose of paying costs to be incurred by the State in performing the Continuing Disclosure Commitment for the applicable fiscal period (biennium), and termination of the Continuing Disclosure Commitment.

There are no debt service reserves, or credit enhancements or credit or liquidity providers, for the Series W Highway Bonds or any property (except the Bond Service Fund) securing their repayment.

The Treasurer reserves the right to modify the Continuing Disclosure Commitment, and to obtain the waiver of noncompliance with any provision of the Continuing Disclosure Commitment, as may be necessary or appropriate:

- To achieve its compliance with any applicable federal securities law or rule.

- To cure any ambiguity, inconsistency or formal defect or omission.

- To address any change in circumstances arising from a change in legal requirements, change in law, or change in the identity, nature, or status of the Treasurer.

Any such amendment or waiver will not be effective unless the Continuing Disclosure Commitment (as amended or taking into account the waiver) would have complied with the requirements of the Rule at the time of the primary offering of the Series W Highway Bonds, after taking into account any applicable amendments to or official interpretations of the Rule, as well as any change in circumstances, and until the Treasurer shall have received either:

- A written opinion of bond, disclosure or other qualified independent special counsel selected by the Treasurer that the amendment or waiver would not materially impair the interest of holders or Beneficial Owners of the Series W Highway Bonds; or

- The written consent to the amendment, or waiver, by the holders of at least a majority of the aggregate outstanding principal amount of the Series W Highway Bonds.

The Continuing Disclosure Commitment will be solely for the benefit of the holders and Beneficial Owners of the Series W Highway Bonds, including holders of book-entry interests in them. The right to enforce the provisions of the Continuing Disclosure Commitment may be limited to a right of the holders or Beneficial Owners of the Series W Highway Bonds to enforce to the extent permitted by law (by mandamus, or other suit, action or proceedings at law or in equity) the obligations and duties under it.

In order to provide certain continuing disclosure with respect to the Series W Highway Bonds in accordance with the Rule, the State has entered into a Disclosure Dissemination Agent Agreement (the "Disclosure Dissemination Agreement") for the benefit of the holders of the Series W Highway Bonds with Digital Assurance Certification, L.L.C. (DAC), under which the State has designated DAC as Disclosure Dissemination Agent (the "Disclosure Dissemination Agent").

The Disclosure Dissemination Agent has only the duties specified in the Disclosure Dissemination Agreement. The Disclosure Dissemination Agent's obligation to deliver the information at the times and with the contents described in the Disclosure Dissemination Agreement is limited to the extent the State has provided that information to the Disclosure Dissemination Agent as required by that Disclosure Dissemination Agreement. The Disclosure Dissemination Agent has no duty with respect to the content of any disclosures or notice made pursuant to the terms of the Disclosure Dissemination Agreement or duty or obligation to review or verify any information in the Annual Report, Audited Financial Statements, notice of Notice Event or Voluntary Report (each as defined in the Disclosure Dissemination Agreement), or any other information, disclosure or notices provided to it by the State, and the Disclosure Dissemination Agent shall not be or be deemed to be acting in any fiduciary capacity for the State, the holders of the Series W Highway Bonds or any other party. The Disclosure Dissemination Agent has no responsibility for any failure to report to the Disclosure Dissemination Agent a Notice Event or a duty to determine the materiality thereof, or to determine or liability for failing to determine whether the State has complied with the Disclosure Dissemination Agreement, and the Disclosure Dissemination Agent may conclusively rely upon certification of the State at all times.

The performance by the State, as the only obligated person with respect to the Series W Highway Bonds, of the Continuing Disclosure Commitment will be subject to the biennial appropriation by the General Assembly of moneys for that purpose.

The Continuing Disclosure Commitment will remain in effect only for such period that the respective series of the Series W Highway Bonds are outstanding and the State remains an obligated person with respect to the Series W Highway Bonds within the meaning of the Rule.

Over the last five years, the State has complied in all material respects with its prior continuing disclosure undertakings under the Rule applicable to (a) the Certificates and other certificates of participation referenced in **Appendix A – State Debt – General – Certificates of Participation**, and (b) State general obligations and other State direct obligations payable from its General Revenue Fund or net State lottery proceeds, except as described in this paragraph. The State’s Annual Information Filing for Fiscal Year 2019 filed on September 26, 2019 with the MSRB through its EMMA system inadvertently omitted information relating to the Portsmouth Bypass Project. Notice of such omission and a supplement to the Annual Information Filing for Fiscal Year 2019 containing the information relating to the Portsmouth Bypass Project was filed with EMMA on November 5, 2019. In addition, the Annual Information Filing for Fiscal Year 2019 was not associated with a CUSIP for the State’s Infrastructure Improvement Refunding Bonds, Series 2002A; the Annual Information Filing for Fiscal Year 2019 and supplemental information was linked to this CUSIP on November 5, 2019. The State has put processes in place to ensure full compliance with its continuing disclosure agreements going forward.

ELIGIBILITY FOR INVESTMENT AND AS PUBLIC FUNDS SECURITY

Provided that the matter as to a particular investor is governed by Ohio law, and subject to any applicable limitations under other provisions of Ohio law, the Series W Highway Bonds are lawful investments for banks, savings and loan associations, credit union share guaranty corporations, trust companies, trustees, fiduciaries, insurance companies, including domestic for life and domestic not for life, trustees or other officers having charge of sinking and bond retirement or other special funds of the State and its political subdivisions and taxing districts, the sinking fund of the State, the administrator of workers' compensation subject to the approval of the workers' compensation board, and State retirement systems (Teachers, Public Employees, Public School Employees, and Police and Fire).

The Act also provides that the Series W Highway Bonds are acceptable under Ohio law as security for repayment of the deposit of public moneys.

Holders and Beneficial Owners should make their own determination as to such matters as the legality of investment in, or the ability to pledge, book-entry interests.

CONCLUDING STATEMENT

All quotations in this Official Statement from, and summaries and explanations of, the Ohio Constitution, the Ohio Revised Code, the Highway Bond Order and any other documents or laws, do not purport to be complete. Reference is made to the pertinent provisions of the Constitution, Ohio Revised Code, the Highway Bond Order and any other documents or laws for complete statements of their provisions. Copies of the Highway Bond Order are available upon request from the Office of Debt Management, 30 East Broad Street, 9th Floor, Columbus, Ohio 43215-3461 (telephone 614-466-6903).

To the extent that any statements in this Official Statement involve matters of opinion or estimates, whether or not expressly stated to be such, those statements are made as such and not as representations of fact or certainty, and no representation is made that any of those statements will be realized. Information in this Official Statement has been derived by the Treasurer from official and other sources and is believed by the Treasurer to be reliable, but information other than that obtained from official records of the State has not been independently confirmed or verified by the Treasurer, and its accuracy is not guaranteed. This Official Statement is not to be construed as a contract or agreement between the State or the Treasurer and the holders or Beneficial Owners of any of the Series W Highway Bonds.

This Official Statement has been prepared, approved, executed and delivered by the Treasurer in his official capacity for and on behalf of the State.

STATE OF OHIO

By: /s/ Robert Cole Sprague
Robert Cole Sprague
State Treasurer of Ohio

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INFORMATION CONCERNING THE STATE OF OHIO

The following discusses certain matters relating to general State finances and debt, and the State's economy and employment, population, agriculture, resources, tax bases and related subjects. This information is from the State's official records, except for information expressly attributed to other sources, and summarizes and describes current and recent historical information. It is not intended to indicate future or continuing trends in the financial or other positions of the State. No representation is made that past experience, as might be shown by this financial and other information, will necessarily continue in the future.

FISCAL MATTERS

General

Consistent with the constitutional provision that no appropriation may be made for a period longer than two years, the State operates on the basis of a fiscal biennium for its appropriations and expenditures. Under current law that biennium for operating purposes runs from July 1 in an odd-numbered year to June 30 in the next odd-numbered year (e.g., the current fiscal biennium began July 1, 2019 and ends June 30, 2021). Within a fiscal biennium, the State operates on the basis of a July 1 to June 30 Fiscal Year. The biennium for general capital appropriations purposes runs from July 1 in an even-numbered year to June 30 in the next even-numbered year. Consistent with the fiscal biennium for operating purposes, the Governor is generally required to submit the Executive Budget to the General Assembly in February of each odd-numbered year. Appropriations legislation reflecting that Executive Budget is then introduced for committee hearings and review first in the House and then in the Senate, with that appropriations legislation as approved by the General Assembly then presented to the Governor for his approval (with possible line item vetoes). See **FISCAL MATTERS – Recent and Current Finances – Current Biennium** for discussion of the enacted budget for the 2020-21 fiscal biennium.

Authority for appropriating State moneys subject to appropriation rests in the bicameral General Assembly, which consists of a 99-member House of Representatives (elected to two-year terms) and a 33-member Senate (elected to overlapping four-year terms). Members of both houses are subject to term limits, with a maximum of eight consecutive years in either. The Governor has veto power, including the power to make line-item vetoes in bills making appropriations. Vetoes may be overridden by a three-fifths vote of each house.

The Constitution requires the General Assembly to "provide for raising revenue, sufficient to defray the expenses of the state, for each year, and also a sufficient sum to pay the principal and interest as they become due on the state debt." The State is effectively precluded by law from ending a Fiscal Year or a biennium in a "deficit" position. State borrowing to meet casual deficits or failures in revenues or to meet expenses not otherwise provided for is limited by the Constitution to $750,000.

Most State operations are financed through the General Revenue Fund (GRF). Personal income and sales and use taxes are the major sources of GRF tax revenue. The last complete Fiscal Year ended June 30, 2019 with a GRF fund balance (after year-end transfers) of $834.0 million. The State has a "rainy day" fund (the Budget Stabilization Fund (BSF)) which by law is intended to carry a balance of up to 8.5% of the GRF revenue for the preceding Fiscal Year (this amount was 5% for Fiscal Year 2016 and prior years). The current BSF balance is $2.691 billion, which equals 8.0% of Fiscal Year 2019 GRF revenue. Recent Fiscal Year-end BSF balances and their percent of GRF revenue for that Fiscal Year were:

Fiscal Year-Ending	BSF Balance(a)	% of GRF Revenue
2014	$1,477,934,000	5.1%
2015	2,004,569,000	6.4
2016	2,034,051,000	6.0
2017	2,034,051,000	6.0
2018	2,691,554,000	8.3
2019	2,691,554,000	8.0

(a) Reflects balance after year-end transfer into BSF; actual cash transfers into the BSF occur early in the following Fiscal Year.

The Revised Code provides that if the Governor ascertains that the available revenue receipts and balances for the GRF or other funds for the then current Fiscal Year will in all probability be less than the appropriations for that Fiscal Year, the Governor shall issue such orders to State agencies as will prevent their expenditures and incurred obligations from exceeding those revenue receipts and balances. The Governor last implemented this directive in the 2008-09 biennium and also several times in prior fiscal biennia.

Listed in the tables below under **Recent Receipts and Disbursements** are the major categories of State revenue sources, including taxes and excises, and the amounts received from those categories. There is no present constitutional limit on the rates of those State levied taxes and excises (except for taxes on intangible property which the State does not currently levy).

At present the State itself does not levy ad valorem taxes on real or tangible personal property. Ad valorem taxes on tangible personal property of public utilities and on real property are levied by political subdivisions and local taxing districts, and State law does not currently allow the imposition of a general ad valorem tax on tangible personal property other than that of public utilities. The Constitution has since 1934 limited the amount of the aggregate levy of ad valorem property taxes on particular property, without a vote of the electors or municipal charter provision, to 1% of true value in money, and statutes limit the amount of that aggregate levy without a vote or charter provision to 10 mills per $1 of assessed valuation -- commonly referred to in the context of Ohio local government finance as the "ten-mill limitation." See **TAX LEVELS AND TAX BASES** for a discussion of the phase-out of local tangible personal property taxes in 2006 through 2009.

The Constitution directs or restricts the use of certain revenues. Highway fees and excises, including gasoline taxes, are limited in use to highway-related purposes. Not less than 50% of the receipts from State income taxes must be returned to the originating political subdivisions and school districts. State net lottery profits are allocated to elementary, secondary, vocational and special education program purposes, including application to debt service on obligations issued to finance capital facilities for a system of common schools.

Constitutional amendments relating to taxation, revenues, expenditures, debt or other subjects may be proposed by action of three-fifths of the members elected to each house of the General Assembly or by initiative petition signed by electors numbering at least 10% of the total number of votes last cast for the office of Governor. Adoption of a proposed amendment requires approval by a majority of electors voting on it at a statewide election. The Ohio Constitution expressly provides that the General Assembly has no power to pass laws impairing the obligation of contracts.

Accounts and Controls; Financial Reports

With each office performing specific functions relating to State expenditures, the Office of Budget and Management (OBM) and the Treasurer of State account for and report on the State's fiscal affairs.

OBM maintains records of the appropriations made by the General Assembly, and its Director, appointed by the Governor, certifies the availability of unencumbered appropriations as a condition of contract validity. OBM fiscal functions include the development and oversight of operating and capital budgets as well as the review, processing, and reporting of financial transactions for most State departments and agencies (excluding, among others, higher education institutions). The OBM Director's certification is required for all expenditure vouchers before OBM may issue State warrants. Upon certification, OBM updates its accounting records to reflect the level of vouchered expenditures. The Treasurer of State maintains the cash and investments that comprise the State treasury and invests State funds. The Treasurer redeems the warrants issued by OBM when presented for payment by financial institutions and monitors the timing and amount of payments to determine the State's cash flow position for investment purposes.

State financial reporting practices have been and are in accordance with generally accepted accounting principles (GAAP basis). Each Comprehensive Annual Financial Report (CAFR) includes the State's Basic Financial Statements (BFS) for that Fiscal Year as examined by the Auditor of State. The most recent CAFRs are accessible via OBM's web page at https://obm.ohio.gov/wps/portal/gov/obm/areas-of-interest/state-accounting/financial-reporting/cafr, and copies may be obtained by contacting OBM, 30 E. Broad Street, 34th Floor, Columbus, Ohio 43215, phone (614) 466-4034. The Fiscal Year 2018 CAFR received the Government Finance Officers Association certificate of achievement for excellence in financial reporting.

The BFS are presented in accordance with a fund classification system prescribed by the Governmental Accounting Standards Board. The GAAP basis financial statement presentation is comprehensive in scope and includes organizations and activities defined within Ohio's reporting entity that are not subject to the State's appropriation process. The "General Fund" as reported in the BFS includes more than just the GRF; it also encompasses the Budget Stabilization Fund and those reimbursement-supported funds that account for activities administered by State agencies and departments and for which special revenue or proprietary fund classifications are considered inappropriate.

Recent Receipts and Disbursements

The following summary statements, prepared by OBM based on its accounting records, include (i) governmental and proprietary appropriated funds, cash receipts and cash disbursements, and (ii) GRF cash basis activity. The governmental and proprietary appropriated funds encompass the General Fund (which includes the GRF and BSF) as well as special revenue, debt service, capital projects, and enterprise fund types.

SUMMARY STATEMENT
GOVERNMENTAL AND PROPRIETARY APPROPRIATED FUNDS
($ in Millions)
Cash Receipts

SOURCE OF RECEIPTS	Fiscal Year				
Taxes:	2015	2016	2017	2018	2019
Personal Income(a)	$8,883.2	$8,169.4	$7,981.1	$8,796.1	$9,313.5
Sales and Use(b)	10,417.8	10,807.7	11,070.5	10,616.2	11,053.3
Financial Institutions Tax(c)	182.1	213.5	187.3	201.1	202.4
Commercial Activity Tax	1,752.6	1,689.1	1,750.8	1,805.5	1,932.0
Gasoline	1,800.6	1,740.4	1,817.4	1,802.8	1,846.0
Public Utilities and Kilowatt Hour	809.8	796.0	796.9	826.5	889.5
Cigarette(d)	808.2	1,007.6	980.5	939.8	918.2
Foreign Insurance	287.3	316.4	321.4	299.4	325.8
Highway Use	35.2	36.2	39.1	34.8	37.4
Estate(e)	3.1	2.2	0.8	0.2	0.2
Alcoholic Beverages	57.7	55.6	58.4	56.8	57.5
Liquor Gallonage	43.4	45.1	46.5	48.1	50.3
Domestic Insurance Franchise	257.2	263.5	273.9	283.4	281.3
Other(f)	62.6	108.9	82.5	106.8	110.7
Total Taxes	25,400.7	25,251.6	25,407.1	25,817.5	27,018.0
Licenses, Permits and Fees	3,072.0	3,641.3	3,284.5	3,946.6	4,065.1
Sales, Services and Charges	1,392.1	1,749.2	1,512.1	1,636.9	1,665.3
Federal Government	22,692.1	22,953.9	22,911.5	23,014.9	23,663.7
Other(g)	4,702.8	5,655.3	5,889.9	6,113.3	6,513.2
Proceeds from Sale of Bonds and Notes	1,103.8	1,214.9	1,507.8	2,202.7	1,042.0
Total Cash Receipts	$58,363.4	$60,466.2	$60,512.9	$62,731.9	$63,967.4

(a) The personal income tax rate was reduced by 8.5% in calendar year 2013, 1.5% in calendar year 2014 and 6.3% in calendar year 2015, and a deduction commenced in tax year 2013 for small businesses of 50%, increasing to 75% in tax years 2014 and 2015, and to 100% for tax years 2016 and beyond, of annual business net income up to $250,000 (see **FISCAL MATTERS** – **Recent and Current Finances** – **Recent Biennia** – **2014-15** and **2016-17**).
(b) Fiscal Year 2018 decline was due to replacing the sales tax on Medicaid managed care organizations with a new health insuring corporation provider assessment (See **FISCAL MATTERS** – **Recent and Current Finances** – **Recent Biennia** – **2018-19**).
(c) Beginning in tax year 2014, replaced the former financial institutions component of the corporate franchise tax.
(d) Beginning July 1, 2015, the cigarette tax was increased from $1.25 per pack (of 20 cigarettes) to $1.60 per pack (see **FISCAL MATTERS** – **Recent and Current Finances** – **Recent Biennia - 2014-15**).
(e) Eliminated effective January 1, 2013; receipts in all years reflect delayed filings or payments.
(f) Includes residual payments under the corporate franchise tax which was phased out in even annual increments from calendar year 2006-2010.
(g) Largest components consist of various reimbursements, loan repayments, unclaimed funds, and investment income.
Totals may not foot due to rounding.

Cash Disbursements

FUND TYPE	Fiscal Year				
General Fund:	2015	2016	2017	2018	2019
General Revenue Fund	$30,831.6	$33,593.1	$34,503.5	$31,727.3	$32,677.6
General Services Fund	4,758.6	4,712.1	4,809.3	5,884.3	5,564.1
Special Revenue Fund(h)	20,644.3	19,356.1	19,005.7	21,947.0	22,088.3
Capital Projects Fund(i)	412.0	607.0	601.2	671.7	794.8
Debt Service Fund(j)	1,116.7	1,136.0	1,168.2	1,155.0	1,243.1
Enterprise Fund(k)	825.0	844.4	775.1	812.9	735.3
Total Cash Disbursements	$58,588.3	$60,248.8	$60,863.0	$62,198.1	$63,103.2

(h) Includes local government support disbursements.
(i) Includes amounts disbursed from proceeds of special obligation bonds and highway general obligation bonds.
(j) Includes the several bond retirement funds for general obligation bonds secured by a pledge of taxes and excises.
(k) Includes workers' compensation, industrial commission, and lottery including deferred prizes, among others.
Totals may not foot due to rounding.

SUMMARY STATEMENT
GENERAL REVENUE FUND CASH BASIS ACTIVITY
($ in Millions)

	Fiscal Year				
	2015	**2016**	**2017**	**2018**	**2019**
Beginning Cash Balance	$1,700.1	$1,711.7	$1,193.3	$557.1	$1,221.0
Cash Receipts:					
Taxes:					
Personal Income(a)	8,506.7	7,799.3	7,606.5	8,411.0	8,910.2
Sales and Use(b)	9,960.2	10,348.0	10,614.6	10,148.2	10,573.4
Financial Institutions Tax(c)	182.1	213.5	187.3	201.1	202.4
Commercial Activity Tax(d)	854.0	1,255.3	1,301.5	1,522.8	1,629.5
Public Utilities and Kilowatt Hour	464.5	502.0	516.1	531.1	562.7
Cigarette(e)	808.2	1,007.6	980.5	939.8	918.2
Domestic Insurance	251.6	258.3	268.6	278.4	276.0
Foreign Insurance	266.6	293.5	301.5	276.5	296.3
Other(f)	111.8	144.0	109.2	114.3	120.8
Total Taxes	21,405.8	21,821.6	21,885.8	22,423.2	23,489.6
Federal Government	9,301.3	11,645.7	11,761.2	9,469.9	9,763.9
Licenses, Permits and Fees	57.5	56.0	57.4	59.2	64.2
Investment Income	23.1	35.1	48.7	64.2	114.4
Other	43.7	49.8	69.1	266.1	87.6
Total Cash Receipts	30,831.4	33,608.3	33,822.1	32,282.6	33,519.7
Cash Disbursements:					
Primary, Secondary and Other Education(g)	7,299.5	7,624.1	7,945.9	8,063.6	8,214.4
Higher Education	2,139.6	2,222.8	2,294.8	2,304.8	2,292.6
Public Assistance and Medicaid	14,863.2	16,995.9	17,437.4	14,482.5	15,052.8
Health and Human Services	1,249.8	1,283.6	1,289.6	1,251.8	1,272.0
Justice and Public Protection	1,850.3	1,983.8	2,052.8	2,130.4	2,222.5
General Government(h)	235.1	249.1	247.8	244.4	391.3
Property Tax Reimbursements(i)	1,801.5	1,786.7	1,790.3	1,802.4	1,801.2
Debt Service	1,287.7	1,333.9	1,322.7	1,343.9	1,430.8
Total Cash Disbursements	30,831.6	33,593.1	34,503.5	31,727.3	32,677.6
Cash Transfers:					
Transfers-in(j)	641.6	322.2	355.9	188.6	247.9
Transfers-out(k)	(629.9)	(855.8)	(310.8)	(80.0)	(773.0)
Ending Cash Balance	$1,711.7	$1,193.3	$557.1	$1,221.0	$1,538.0

(a) The personal income tax rate was reduced by 8.5% in calendar year 2013, 1.5% in calendar year 2014 and 6.3% in calendar year 2015, and a deduction commenced in tax year 2013 for small businesses of 50%, increasing to 75% in tax years 2014 and 2015, and to 100% for tax years 2016 and beyond, of annual business net income up to $250,000 (see **FISCAL MATTERS** – **Recent and Current Finances** – **Recent Biennia** – **2014-15, 2016-17**).

(b) Fiscal Year 2018 decline due to the replacement of the sales tax on Medicaid managed care organizations with a new health insuring corporation provider assessment (See **FISCAL MATTERS** – **Recent and Current Finances** – **Recent Biennia** – **2018-19**).

(c) Beginning in tax year 2014, replaced the former financial institutions component of the corporate franchise tax.

(d) See **TAX LEVELS AND TAX BASES** – **Commercial Activity Tax** for discussion of the increasing share of CAT receipts deposited into the GRF.

(e) Beginning July 1, 2015, the cigarette tax was increased from $1.25 to $1.60 per pack (see **FISCAL MATTERS** – **Recent and Current Finances** – **Recent Biennia - 2014-15**).

(f) Includes residual payments under the corporate franchise tax which was phased out in even annual increments from calendar year 2006-2010.

(g) Mainly subsidies to school districts for primary and secondary education.

(h) Includes amounts for non-highway transportation purposes, including mass transit, rail, and aviation.

(i) State reimbursements to taxing subdivisions for the 12.5% property tax rollback granted to homeowners of real property, for partial real property homestead tax exemptions for the elderly and handicapped (expanded commencing in July 2007), and for revenue reductions resulting from phase-out of local taxes on tangible personal property (see **FISCAL MATTERS** – **Recent and Current Finances** – **Recent Biennia - 2014-15**).

(j) Fiscal Years 2015-2019 include transfers of $81.0 million, $53.2 million, $10.0 million, $46.2 million and $66.0 million, respectively, from the Petroleum Activity Tax Public Highways Fund; Fiscal Years 2015, 2017 and 2019 include transfers of $250.4 million, $163.3 million and $119.7 million from School District and Local Government Property Tax Replacement Funds, respectively; Fiscal Year 2015 includes a transfer of $221.0 million from the Small Business Augmentation Fund, and Fiscal Year 2016 includes a transfer of $158.0 million from the Medicaid reserve fund.

(k) Fiscal Years 2016, 2017 and 2019 include transfers of $425.5 million, $29.5 million and $657.5 million to the BSF, respectively; Fiscal Year 2015 includes a transfer of $330.0 million to the Medicaid reserve fund and $229 million to the Small Business Augmentation Fund; Fiscal Year 2016 includes a transfer of $40.0 million to the Unemployment Compensation Contingency Fund; Fiscal Years 2016 to 2019 include transfers of $50.0 million, $150.0 million, $41.8 million and $49.3 million to the Health and Human Services Fund, respectively; and Fiscal Year 2019 includes a transfer of $30.0 million to the Medicaid Local Sales Tax Transition Fund.

Totals may not foot due to rounding.

Recent and Current Finances

Introductory Information

The summary statements above identify receipts from specific taxes and excises that are sources of significant amounts of revenue to the State, and particularly to the GRF. As noted, there are constitutional limitations on the use of some taxes and excises, and mandated allocations of portions of some others. As the statements portray, a substantial amount of total State-level revenue is distributed to local governments and school districts under ongoing programs, including local property tax relief.

Economic activity in Ohio, as in other industrially-developed states, tends to be somewhat more cyclical than in some other states and in the nation as a whole. The GRF ending fund balance tends to be reduced during less favorable national economic periods and increased during more favorable economic periods. The GRF ending cash and fund balances for Fiscal Year 2019 were $1.54 billion and $1.15 billion, respectively, with $312.4 million of that ending fund balance transferred pursuant to statutory designations leaving a balance of $834.0 million. Recent biennium-ending GRF balances were:

Biennium	Cash Balance	Fund Balance(a)	Fund Balance less Designated Transfers(b)
2010-11	$844,467,000	$430,707,000	$138,816,000
2012-13	2,639,249,000	2,278,202,000	1,110,942,000
2014-15	1,711,679,000	1,286,469,000	550,366,000
2016-17	557,089,900	170,872,600	170,872,600
2018-19	1,538,011,800	1,146,385,400	833,985,400

(a) Reflects the ending cash balance less amounts encumbered to cover financial commitments made prior to the end of the Fiscal Year.

(b) Reflects the ending fund balance less any amounts designated for transfer to other funds, including the BSF.

Actions have been and may be taken by the State during less favorable economic periods to ensure revenue/expenditure balance (particularly in the GRF), some of which are described below. None of those actions have been applied to appropriations or expenditures needed for debt service or lease payments relating to any State obligations.

The appropriations acts for the 2020-21 biennium included all necessary appropriations for debt service on State obligations and for lease payments relating to lease rental obligations issued by the Treasurer of State and for certificates of participation (see **FISCAL MATTERS – Recent and Current Finances – Current Biennium** and **State Debt – General**).

The Revised Code imposes a limitation on most GRF appropriations commencing with the 2008-09 fiscal biennium. This statutory limitation initially used Fiscal Year 2007 GRF appropriations as a baseline (excluding appropriations for debt service, tax relief and refunds, and certain appropriations reflecting moneys received from the federal government) and then applies an annual growth factor equal to the greater of 3.5% or the sum of the inflation rates and rate of State population change. Every fourth Fiscal Year thereafter becomes a new base year. All GRF appropriations since Fiscal Year 2007 have complied with this limitation.

The following is a selective general discussion of State finances, particularly GRF receipts and expenditures, for recent and the current biennia. As evidenced by the actions discussed, the State administrations and both houses of the General Assembly have been and are committed to, and have taken and are taking, actions that ensure a balance of GRF resources and expenditures.

Recent Biennia

2012-13

2012-13 Biennial Budget and Appropriations. Consistent with State law, the Governor's Executive Budget for the 2012-13 biennium was released in March 2011 and introduced in the General Assembly. After extended hearings and review, the 2012-13 biennial appropriations Act was passed by the General Assembly and signed (with selective vetoes) by the Governor on June 30, 2011. To address the use of non-recurring funding sources in the prior 2010-11 fiscal biennium including federal stimulus amounts received under ARRA, the Act included targeted spending cuts across most State agencies and major new Medicaid reform and cost containment measures. Reflecting the tax law changes described below and a conservative underlying economic forecast, that Act provided for total GRF biennial appropriations of approximately $55.8 billion. This reflected a 10.5% increase over the 2010-11 GRF biennial appropriations, based on total expected GRF biennial revenue of approximately $56.07 billion (a 6% increase from 2010-11 GRF biennial revenues). GRF appropriations for major program categories (including debt service) compared to 2010-11 actual GRF biennial spending reflected increases of 30.2% for Medicaid (due in large part to the absence of ARRA funding in the 2012-13 biennium and the redirection of 2012-13 biennial spending from non-GRF to GRF sources); decreases of 3% for elementary and secondary education, 9.1% for higher education, and 8.1% for mental health and developmental disabilities (due to the transfer of community mental health Medicaid services to the Department of Job and Family Services); and flat funding for corrections and youth services. That Act also reflected the restructuring of $440 million of Fiscal Year 2012 GRF debt service into Fiscal Years 2013 through 2025, approximately three-quarters of which was accomplished by the July 2011 issuance by the Ohio Public Facilities Commission of $488.8 million in refunding bonds, with the remainder accomplished by the September 2011 issuance by the Ohio Building Authority of $149.3 million in refunding bonds.

The Executive Budget, the GRF appropriations Act and the separate appropriations acts for the biennium included all necessary debt service and lease rental payments related to State obligations (after the restructuring of Fiscal Year 2012 GRF debt service payments).

Major new sources of revenues or expenditure savings reflected in the 2012-13 appropriations Act included:

- Transfer of the State's spirituous liquor system to JobsOhio. On February 1, 2013, the State granted a 25-year franchise on its spirituous liquor system to JobsOhio Beverage System, a nonprofit corporation the sole member of which is JobsOhio, itself a nonprofit corporation created to promote economic development, job creation and retention, job training and the recruitment of business to the State. In exchange for the franchise, the State received a payment of $1.464 billion, $500 million of which was deposited in the GRF, $863.5 million of which was used to make provision for payment of all debt service on $725.0 million of then outstanding State bonds and notes secured by a pledge of the State's profits from the sale of spirituous liquor, and $100 million of which was for funding certain revitalization projects. With granting of that franchise to JobsOhio Beverage System, the State stopped receiving annual deposits to the GRF from net liquor profits (those deposits totaled $153.0 million in Fiscal Year 2011, $92.5 million in Fiscal Year 2012 and $167.0 million in Fiscal Year 2013, $88 million of which was generated through the February 1 granting of the franchise to JobsOhio Beverage System). Litigation commenced in April 2011 and August 2014 that challenged, under various provisions of the Ohio Constitution, certain aspects of both JobsOhio and the General Assembly's February 2011 law that authorized its creation and the 2012-13 appropriations Act that amended various statutes applying to JobsOhio. In August 2011, the Ohio Supreme Court dismissed the first case, and in June 2014, the Ohio Supreme Court affirmed prior judgments of the lower courts in the second case after concluding that the plaintiffs lacked standing to bring this suit. Plaintiffs in the second case subsequently filed additional actions and appeals with the Court of Appeals and the Ohio Supreme Court in an attempt to revive these challenges to JobsOhio and the laws authorizing its creation and the transfer of the State's spirituous liquor system. The Supreme Court ultimately denied plaintiffs' motion for reconsideration in November 2016.
- Sale of five State-owned prison facilities to private operators expected to result in a net payment to the GRF of $75 million. (Based on the proposals it received for the five prisons, the State opted to sell only one of those facilities that accomplished most of the desired financial result for the 2012-13 biennium.) Litigation commenced in August 2011, and then again in July 2012, challenging the authorization in the 2012-13 appropriations Act to sell these prison facilities. Specifically, this litigation alleged that the provisions in that Act authorizing the sale of these prisons, as well as that entire Act, were enacted in violation of the "one subject rule" of the Ohio Constitution and violated the constitutional right to referendum, and that the sale of the prisons would create a joinder of private and public property interests violating the constitutional prohibition against the State entering into a joint venture. In February 2016, the Ohio Supreme Court upheld the prison sale provisions of the Act, finding their enactment did not violate the "one subject rule" of the Ohio Constitution or its prohibition against the State entering into a joint venture with private enterprise.
- Reduction of local government fund allocations by $111 million in Fiscal Year 2012 and $340 million in Fiscal Year 2013. Beginning in Fiscal Year 2014, allocations are made by committing to the local government fund a set percentage of annual tax revenues deposited into the GRF (beginning with Fiscal Year 2013 GRF tax revenues).
- Reduction of public library fund allocations to 95% of Fiscal Year 2011 levels resulting in expenditure reductions of $52.3 million in Fiscal Year 2012 and $102.8 million in Fiscal Year 2013. Beginning in Fiscal Year 2014, allocations to public libraries are made by committing to the public library fund a set

percentage of annual tax revenues deposited into the GRF (beginning with Fiscal Year 2013 GRF tax revenues).

- Accelerated phase-out of reimbursement payments to local governments and school districts in connection with the elimination of the tangible personal property tax resulting in an increased share (estimated at $293.5 million in Fiscal Year 2012 and $597.7 million in Fiscal Year 2013) of the commercial activity tax being deposited into the GRF (see **TAX LEVELS AND TAX BASES – Property Tax**).
- Accelerated phase-out of reimbursement payments to local governments and school districts for electric power generation deregulation and natural gas deregulation resulting in a larger share (estimated at $141.6 million in Fiscal Year 2012 and $147.4 million in Fiscal Year 2013) of the kilowatt-hour tax and the entire (approximately $66.0 million in Fiscal Year 2012 and $66.0 million in Fiscal Year 2013) natural gas consumption tax being reallocated to the GRF.
- $235 million from transfers to the GRF of unclaimed funds and from other non-GRF funds, and $12 million from a tax amnesty program.

The 2012-13 appropriations Act also reflected the following tax law changes:

- Implementation of the final 4.2% annual decrease in State personal income tax rates resulting in an aggregate 21% decrease (previously, personal income tax rates were reduced 4.2% annually in each of the tax years 2005 through 2008, with this final reduction delayed from tax year 2009 to tax year 2011).
- Elimination of the estate tax beginning January 1, 2013, previously levied at a rate of 6% on estates over $338,333 and 7% on estates over $500,000. In Fiscal Year 2010, estate tax collections totaled $285.8 million of which $230.8 million was distributed to the local government jurisdictions from which it was collected and with $55.0 million retained by the State and deposited into the GRF.
- Establishment of the InvestOhio income tax credit program under which investors in small businesses based in Ohio who hold their investments for at least two years may receive 10% income tax credits limited to a maximum of $10 million per investor per biennium with no more than $100 million of those credits to be issued over two years.

The 2012-13 biennial appropriations Act created a Medicaid reserve fund and authorized the OBM Director to transfer up to $130 million from the GRF, if necessary, to provide for the payment of Medicaid costs above the enacted level of appropriations. That Act also created a $104 million Unemployment Compensation Contingency Fund to pay interest on federal advances to the State Unemployment Compensation Fund, $70.7 million of which was used to make the interest payment due in September 2011, with the remaining amount applied to the September 2012 interest payment of $65.8 million. The September 2012 interest payment was also funded by a $25 million GRF supplemental appropriation and a contribution from the State's Unemployment Compensation Administration Fund.

2012 Mid-Biennium Review. On March 14, 2012, the Governor announced a series of policy proposals resulting from a "mid-biennium review" (2012 MBR), with a stated focus on job creation as a priority. The Governor's 2012 MBR included proposals for General Assembly consideration in the areas of: *energy* (including shale oil and gas production opportunities in the Marcellus and Utica fields in the State, and modernizing the State's oil and gas severance tax; electric generation and transmission; coal; cogeneration, alternative fuels and renewables; energy efficiency; and regulatory reform); *personal income tax reduction* (proposing that any new revenue from shale oil and gas production and the 2012 MBR proposal to modernize the State's oil and gas severance tax system be used to reduce personal income tax rates by a commensurate amount); *bank and financial institutions tax reform* (including a modernization, intended to be revenue-neutral, of Ohio's taxes on banks and financial institutions replacing the corporate franchise and dealers in intangibles tax with a new financial institutions tax more accurately reflecting modern banking practices, closing loopholes and reducing the overall tax burden on most banks); *education* (including proposals for strengthening Ohio's "third grade reading guarantee", career education, a new school performance measuring system, expansion of digital and online learning, flexibility for teacher evaluations, new standards for dropout recovery schools, assessments of all publicly funded early childhood programs, and supporting adoption of a school reform plan for the City of Cleveland schools); *workforce development* (creating job opportunities for the developmentally disabled; an improved workforce development program; allowing those undergoing training with an employer to continue collecting unemployment benefits; linking energy companies with trained workers; and matching skilled veterans to in demand jobs); and achieving more *management efficiency* with associated State and local government budgetary savings (including combining the separate Offices of the State Architect and Engineer and the Office of Energy Services into an Ohio Facilities Construction Commission (OFCC) to administer the design and construction of state public facilities, with the Ohio School Facilities Commission retained as an independent agency within the OFCC but sharing employees and facilities). Those 2012 MBR proposals were considered by the General Assembly commencing in March in twelve separate pieces of legislation, and the General Assembly in May and June passed seven pieces of legislation addressing the subjects of energy (not including the 2012 MBR proposed changes to the State's oil and gas severance tax), tax reform (not including the 2012 MBR personal income tax reduction proposal), education, workforce development, and management efficiency for both state and local governments.

As further implementation of the 2012 MBR, the General Assembly enacted and the Governor signed into law on December 20, 2012, a new financial institutions tax that first applied to tax year 2014. This new tax applies to many companies that were previously subject to Ohio's corporate franchise tax (primarily banks and other corporations classified as financial institutions) and also generally subjects "dealers in intangibles" (e.g., mortgage brokers, stockbrokers, finance and loan companies not classified as financial institutions) to the commercial activity tax. This new financial institutions tax replaced the prior corporate franchise tax on financial institutions and the prior dealers in intangibles tax. The proceeds from the new financial institutions tax are deposited in the GRF like the proceeds from the taxes it replaced. Based on revenue targets and mechanisms established in the legislation, OBM projected the effect of these tax changes to be revenue neutral to the GRF.

Fiscal Year 2013 Results. The State ended Fiscal Year 2013 with GRF cash and fund balances of $2.64 billion and $2.28 billion, respectively. These ending balances reflect approximately $1.15 billion in Fiscal Year 2013 underspending due largely to actual Medicaid expenditures $883.0 million below the original Fiscal Year 2013 spending estimate. Of that ending GRF fund balance, the State deposited $995.9 million into the BSF increasing its balance to $1.48 billion which was the then statutorily designated five percent of Fiscal Year 2013 GRF revenues; carried-forward $963.2 million to offset the one-time cost of accelerating the phase-in of reductions in State personal income tax withholding rates (see **FISCAL MATTERS** – **Recent and Current Finances** – **Recent Biennia** – **2014-15**), and transferred $120 million into the Unemployment Compensation Contingency Fund to pay interest on federal advances to the State Unemployment Compensation Fund and $51.3 million into disaster services/emergency funds. The remaining $147.8 million was reserved in the GRF to maintain the statutory target of one-half of one percent of Fiscal Year 2013 GRF revenues as an ending fund balance.

2014-15

2014-15 Biennial Budget and Appropriations. Consistent with State law, the Governor's Executive Budget for the 2014-15 biennium was released in February 2013 and introduced in the General Assembly. After extended hearings and review, the 2014-15 biennial appropriations Act was passed by the General Assembly and signed (with selective vetoes) by the Governor on June 30, 2013. With a stated focus on job creation and continued spending restraint, and based on a conservative economic forecast, that Act provided for total GRF biennial appropriations of approximately $62.0 billion. This reflected an 11.1% increase over 2012-13 GRF biennial appropriations, and was based on expected total GRF biennial revenue (not including the $963.2 million carried-forward from the 2012-13 biennium) of approximately $61.1 billion (a 7.7% increase from 2012-13 GRF biennial revenues).

GRF major program categories (including debt service) reflected the following changes in spending: for Medicaid, increases of 16.8% in Fiscal Year 2014 appropriations over Fiscal Year 2013 expenditures (attributable in part to federal Affordable Care Act induced enrollment of previously eligible individuals and federally mandated physician rate increases) and 6.2% for Fiscal Year 2015 appropriations over Fiscal Year 2014 appropriations; for elementary and secondary education, increases of 5.0% for Fiscal Year 2014 appropriations over Fiscal Year 2013 expenditures and 5.8% for Fiscal Year 2015 appropriations over Fiscal Year 2014 appropriations (due largely to enhancements in the K-12 school funding formula); for higher education, increases of 1.8% for Fiscal Year 2014 appropriations over Fiscal Year 2013 expenditures and 2.1% for Fiscal Year 2015 appropriations over Fiscal Year 2014 appropriations; for corrections and youth services, increases of 0.1% for Fiscal Year 2014 appropriations over Fiscal Year 2013 expenditures and 0.2% for Fiscal Year 2015 appropriations over Fiscal Year 2014 appropriations; and for mental health and developmental disabilities, an increase of 5.0% for Fiscal Year 2014 appropriations over Fiscal Year 2013 expenditures and an increase of 4.0% for Fiscal Year 2015 appropriations over Fiscal Year 2014 appropriations.

The Act also implemented a new school funding formula (see **SCHOOLS AND MUNICIPALITIES – Schools**), allocated a portion of State public higher education funding to institutions based on their graduation rates, and eliminated the Ohio Cultural Facilities Commission by moving the administration of cultural facilities projects to the Ohio Facilities Construction Commission to achieve efficiencies and budgetary savings.

The Executive Budget, the 2014-15 appropriations Act and separate appropriations acts for the biennium included all necessary debt service and lease rental payments related to State debt obligations.

The 2014-15 biennial appropriations Act reflected the following reductions and related adjustments of major State taxes (primarily the personal income and sales and use taxes), resulting in an estimated net reduction in GRF revenues of $1.16 billion in Fiscal Year 2014 and $771 million in Fiscal Year 2015, including:

- A 10% reduction in State personal income tax rates phased-in over three years (8.5% in calendar year 2013, 0.5% in calendar year 2014, and 1.0% in calendar year 2015), coupled with a freeze on the indexing of the State income tax brackets and the personal exemption for tax years 2013 through 2015 until these rate reductions are fully implemented.
- Creation of a non-refundable earned income tax credit equal to 5% of the federal earned income credit that is limited to 50% of liability for gross income that exceeds $20,000.
- A new deduction for small businesses of 50% of annual adjusted business net income up to $250,000.
- Elimination of the $20 personal income tax exemption for filers with a gross income greater than $30,000 and of the gambling loss deduction.
- An increase in the State sales and use tax by one-quarter percent (from 5.5% to 5.75%) beginning September 1, 2013.
- Authorization of full membership for the State in the streamlined sales tax project for the collection of State sales taxes on out-of-state companies for catalog and internet purchases.
- Expansion of the State sales tax base to include digital goods such as e-books, music and video downloads and repeal of the exemption for magazine purchases.
- Elimination of the corporate franchise tax (and dealers in intangibles tax) and the initial implementation and collection of the new financial institutions tax in tax year 2014.
- Elimination of the 12.5% property tax roll back for owner-occupied residential property for new voter-approved local property tax levies.
- Reinstituting income requirements for eligibility for new applicants for the State's homestead tax exemption (this exemption was expanded in 2007 to include all senior citizens and disabled Ohioans regardless of income).
- Establishing a variable minimum for the commercial activity tax for businesses with gross receipts greater than $1 million and an exemption from the CAT for grain handlers.

Medicaid Expansion. Subsequent to the passage of the GRF appropriations Act, the seven member State Controlling Board on October 21, 2013 voted 5 to 2 to increase federal Medicaid appropriations by approximately $562 million in Fiscal Year 2014 and approximately $2.0 billion in Fiscal Year 2015. These additional federal appropriations were to support the federally-authorized expansion of the Medicaid program to cover those with incomes up to 138% of the federal poverty level using 100% federal funds in fiscal years 2014 and 2015. On October 22, 2013, six State Representatives and two local right to life organizations filed an action in the Ohio Supreme Court against the Controlling Board and the Ohio Department of Medicaid requesting that Court vacate the Controlling Board's October 21 action. The Controlling Board and State Department of Medicaid filed their initial answer to the complaint on November 5 and, after all evidence and briefs of the parties were submitted on the expedited schedule set for this case, the Court on December 20, 2013 issued its decision upholding the Controlling Board's action.

2014 Mid-Biennium Review. On March 12, 2014, the Governor announced a series of initiatives across a range of topics resulting from a "mid-biennium review" for 2014-15 (2014 MBR). The Governor's 2014 MBR included a range of proposals in the areas of: *elementary and secondary education* (including proposals for dropout prevention and recovery and making technical and vocational education accessible by more students as early as the seventh grade); *higher education* (including proposals for reforming Ohio's dual credit programming to encourage more students to earn college credit while in high school; extending to two-year community colleges a funding formula tied to successful student outcomes; tying state funding for technical centers to the percentage of their students that find a job and other outcome-based benchmarks; increased use of technology and distance learning; increasing enrollment of international students and their retention in Ohio post-graduation; providing community colleges the option to offer a guaranteed tuition rate; and providing veterans college credit for their military training and experience); *income tax reductions and other tax adjustments* (including proposals to lower income tax rates across all income levels by 8.5% over the next three years; increasing the state's earned income tax credit for low-income Ohioans from 5% to 15% of the federal earned income tax credit; increasing the state income tax personal exemptions for those with annual incomes up to $80,000; raising the tax on cigarettes by 60 cents to $1.85 per pack with equivalent taxes on other tobacco products including e-cigarettes; increasing the oil and gas severance tax to 2.75% of producer gross receipts while eliminating that tax for small conventional gas producers and exempting from that tax up to $8 million of gross receipts per well during the first three years to help producers recoup their start-up drilling costs, with approximately 20% of severance tax revenue directed to local governments in shale oil and gas producing regions of the state; and updating the commercial activity tax rate from its initial 0.26% rate established in 2005 to 0.30%); *workforce* (aligning the three main federal workforce programs through a single, integrated plan to provide faster and improved training; and expediting professional licensing and certification for veterans and their spouses); and *human services* (including increased access to crisis intervention and safe places for those with mental illness and addictions; allocating $26.9 million of non-GRF funds to support tobacco prevention and cessation programs; and expanding drug and substance abuse prevention in schools and prioritizing statewide funding for prevention initiatives). The 2014 MBR also proposed increasing appropriations to the Department of Rehabilitation and Correction by $53.5 million to address a rise in the prison population, and reducing local property tax reimbursement and debt service appropriations for the biennium by $35 million and $92 million, respectively, due to lower than expected payments, while continuing all necessary appropriations for debt service and lease rental payments for State obligations.

Those 2014 MBR proposals were introduced in the General Assembly in March as fourteen separate pieces of legislation, seven of which were enacted by the General Assembly in May and June addressing the subjects of elementary and secondary education (including $5 million for alternative education programs), higher education (including $3.1 million for the State share of instruction), workforce and human services (including $16 million for early education and child care, $16.8 million for adult and child protection services, and $3.2 million for Family and Children Services). As further implementation of the biennial appropriations Act and due to positive Fiscal Year 2014 financial results, the 2014 MBR legislation passed by the General Assembly also included the following additional reductions and adjustments to the State personal income tax resulting in an estimated net reduction in GRF revenues of $402 million in Fiscal Year 2015:

- Acceleration into calendar year 2014 of the remaining 1% reduction in State personal income tax rates previously scheduled to be effective in calendar year 2015.
- An increase in the non-refundable earned income tax credit from 5% to 10% of the federal earned income credit that is limited to 50% of liability for gross income that exceeds $20,000.
- A temporary increase in the deduction for small businesses from 50% up to 75% of annual business net income up to $250,000 for tax year 2014.
- An increase in the State income tax personal exemption from $1,700 to $2,200 for gross income less than $40,000, and from $1,700 to $1,950 for gross income between $40,000 and $80,000.

The 2014 MBR legislation passed by the General Assembly also authorized the OBM Director to transfer to a Medicaid reserve fund up to $300 million from the GRF, if necessary, to provide for the payment of Medicaid costs above the enacted level of appropriations. The full amount of this transfer was made at the end of Fiscal Year 2014 (see next paragraph for further transfers out of the Medicaid reserve fund at the end of Fiscal Year 2015).

Fiscal Year 2015 Financial Results. The State ended Fiscal Year 2015 with GRF cash and fund balances of $1.71 billion and $1.29 billion, respectively. Of that ending GRF fund balance, the State reserved $157.4 million to maintain the statutory target of one-half of one percent of State Fiscal Year 2015 GRF revenues as an ending fund balance, carried-forward $393.0 million to cover the planned for and modest variance of Fiscal Year 2016 GRF appropriations over estimated revenue, transferred $425.5 million to the BSF, $50 million to the health and human services fund (see **2016-17** below for discussion on the creation of this fund), $42 million to the Straight A fund, $40 million to pay unemployment compensation loan interest and $20 million for disaster services. The State also made 14 other smaller transfers totaling $149.3 million with the remaining $9.1 million transferred to the income tax reduction fund. Of the $331.1 million Fiscal Year 2015 ending balance in the Medicaid reserve fund, the State transferred $72.0 million to a school district tangible personal property tax supplement fund, $101.1 million to the BSF (bringing its balance to $2.005 billion), and $158.0 million to the GRF.

2016-17

2016-17 Biennial Budget and Appropriations. Consistent with State law, the Governor's Executive Budget for the 2016-17 biennium was released on February 2, 2015 and introduced in the General Assembly. After extended hearings and review, the 2016-17 biennial appropriations Act was passed by the General Assembly and signed (with selective vetoes) by the Governor on June 30, 2015. Reflecting a stated continuing focus on job creation, and based on a conservative economic forecast, that Act provided for total GRF biennial appropriations of approximately $71.2 billion reflecting a 14.9% increase over the 2014-15 GRF biennial appropriations. Those appropriations were based upon then estimated total expected GRF revenue of $34.9 billion in Fiscal Year 2016, which excluded the $393.0 million carried-forward from Fiscal Year 2015 (reflecting a 10.8% increase over Fiscal Year 2015 revenue), and $36.5 billion in Fiscal Year 2017 (reflecting a 4.6% increase over expected Fiscal Year 2016 revenues) (see discussion below of Fiscal Year 2017 GRF revenue revisions in July 2016 and January 2017). Total estimated GRF revenues across the 2016-17 biennium reflected a 17.5% increase from 2014-15 GRF biennial revenues.

GRF major program categories (excluding debt service) reflected the following increases: for Medicaid, 21.8% in Fiscal Year 2016 appropriations over Fiscal Year 2015 expenditures (driven in large part to the shift in funding to the GRF from non-GRF sources beginning in Fiscal Year 2016 for the Medicaid expansion population), and 5.1% for Fiscal Year 2017 appropriations over Fiscal Year 2016 appropriations; for elementary and secondary education, 5.0% for Fiscal Year 2016 appropriations over Fiscal Year 2015 expenditures, and 4.2% for Fiscal Year 2017 appropriations over Fiscal Year 2016 appropriations; for higher education, 4.5% for Fiscal Year 2016 appropriations over Fiscal Year 2015 expenditures, and 3.3% for Fiscal Year 2017 appropriations over Fiscal Year 2016 appropriations; for mental health and developmental disabilities, 9.1% for Fiscal Year 2016 appropriations over Fiscal Year 2015 expenditures, and 7.3% for Fiscal Year 2017 appropriations over Fiscal Year 2016 appropriations; for corrections and youth services, 4.8% for Fiscal Year 2016 appropriations over Fiscal Year 2015 expenditures, and 3.0% for Fiscal Year 2017 appropriations over Fiscal Year 2016 appropriations. The Act also modified the school funding formula to distribute new resources to districts with less capacity to raise revenues locally (see **SCHOOLS AND MUNICIPALITIES – Schools**) and froze tuition and fees for two- and four-year higher education institutions.

The Executive Budget, the 2016-17 biennial appropriations Act and separate appropriations acts for the biennium included all necessary debt service and lease rental payment appropriation authority related to State debt obligations.

The 2016-17 biennial appropriations Act reflected the following tax reductions and related adjustments, resulting in an estimated net reduction in GRF revenues relative to prior law of $869.0 million in Fiscal Year 2016 and $952.0 million in Fiscal Year 2017, including:

- An across-the-board 6.3% reduction in State personal income tax rates in calendar year 2015.
- Continuation of the 75% exemption on the first $250,000 of business net income for small businesses in tax year 2015 (previously increased on a temporary basis for tax year 2014 (see **FISCAL MATTERS – Recent and Current Finances – Recent Biennia - 2014-15**)) and completely exempting the first $250,000 of business net income in tax year 2016 and beyond.
- Beginning in tax year 2015, replaced the multi-bracket tax system for small businesses with a low flat rate of 3% on the amount of business net income. Legislation subsequently passed by the General Assembly clarifying this provision was estimated by OBM to reduce GRF revenues in Fiscal Year 2016 by up to $81 million.
- Beginning in tax year 2015, limited certain retirement income credits to taxpayers whose individual or joint adjusted gross income is less than $100,000 (this exemption was previously available to all taxpayers aged 65 years and older).
- Increased the cigarette tax from $1.25 per pack (of 20 cigarettes) to $1.60 per pack, effective July 1, 2015.

The 2016-17 biennial appropriations Act also reflected:

- The resumption of the phase-out of reimbursements to local governments and school districts in connection with the elimination of the tangible personal property tax, resulting in an increased share (estimated at $428.7 million in Fiscal Year 2016 and $445.3 million in Fiscal Year 2017) of the commercial activity tax being deposited into the GRF (see **TAX LEVELS AND TAX BASES – Property Tax**).
- The continuing phase-out of reimbursements to local governments and school districts for electric power generation deregulation and natural gas deregulation resulting in an increased share (estimated at $56.3 million in Fiscal Year 2016 and $56.0 million in Fiscal Year 2017) of the kilowatt-hour tax being reallocated to the GRF.

The 2016-17 biennial appropriations Act also created a health and human services fund to pay for public health programs or services and authorized the OBM Director to transfer from the GRF $150 million in Fiscal Year 2017 into the fund, which amount is in addition to the $50 million transferred from the GRF at the end of Fiscal Year 2015 into the fund.

As is customary at the beginning of the second year of a fiscal biennium, OBM in July 2016 revised its Fiscal Year 2017 GRF revenue forecast to reflect updated economic assumptions, actual Fiscal Year 2016 revenue performance, and tax law adjustments enacted by General Assembly after adoption of the 2016-17 biennial appropriations Act. As part of this revision, OBM reduced its estimated Fiscal Year 2017 GRF tax revenue forecast by $282.0 million, a 1.2% reduction compared to the original Fiscal Year 2017 tax revenue forecast. This reduction in forecasted tax revenues was largely within the personal income and commercial activity taxes. As part of the Governor's Executive Budget proposal for the 2018-19 fiscal biennium (see **2018-19** below), and based on tax revenue underperformance, in January 2017 OBM further reduced its estimated Fiscal Year 2017 GRF tax revenue forecast by $592.2 million, a 2.7% reduction compared to the July 2016 revision. The largest variances (compared to the July 2016 revision) were in the personal income tax (reduced by $333.9 million or 4.0%), the sales and use tax (reduced by $259.3 million or 2.4%), and the commercial activity tax (reduced by $32.0 million or 2.5%).

Fiscal Year 2017 Financial Results. The State ended Fiscal Year 2017 with a GRF cash balance of $557.1 million and an ending fund balance of $170.9 million that was reserved to maintain the statutory target of one-half of one percent of State Fiscal Year 2017 GRF revenues as an ending fund balance.

2018-19

Consistent with State law, the Governor's Executive Budget for the 2018-19 fiscal biennium was released on January 30, 2017, and introduced in the General Assembly. After extended hearings and review, the 2018-19 biennial appropriations Act was passed by the General Assembly and signed by the Governor (with selective vetoes) on June 30, 2017.

To address lower GRF revenue estimates for the 2018-19 fiscal biennium, the Act included both across-the-board and targeted spending cuts across most State agencies and programs. Reflecting a stated continuing focus on job creation, and based on a conservative economic forecast, that Act provided for the following GRF appropriations:

GRF Appropriations 2018-19 Biennium ($ in billions)

Fiscal Year 2017 Expenditures	Fiscal Year 2018 Appropriations	% Change Over Fiscal Year 2017 Expenditures	Fiscal Year 2019 Appropriations	% Change Over Fiscal Year 2018 Appropriations	2018-19 Biennium Total Appropriations
$34.5	$32.2	-6.7%	$33.3	3.5%	$65.5

Major program categories reflect the following GRF appropriation changes (excluding debt service appropriations):

- *Medicaid* - Fiscal Year 2018 appropriations decreased 15.0% over Fiscal Year 2017 expenditures (as discussed below, driven largely by the replacement of the Medicaid managed care organization sales tax, the receipts of which were being deposited into the GRF, by a new health insuring corporation provider assessment, the receipts of which are now deposited into a dedicated non-GRF fund), and Fiscal Year 2019 appropriations increased 5.7% over Fiscal Year 2018 appropriations.
- *Elementary and Secondary Education* - Fiscal Year 2018 appropriations increased 1.5% over Fiscal Year 2017 expenditures, and Fiscal Year 2019 appropriations increased 1.6% over Fiscal Year 2018 appropriations.
- *Higher Education* – Fiscal Year 2018 appropriations increased 0.5% over Fiscal Year 2017 expenditures, and Fiscal Year 2019 appropriations decreased 0.3% over Fiscal Year 2018 appropriations.
- *Mental Health and Developmental Disabilities* – Fiscal Year 2018 appropriations decreased 0.9% over Fiscal Year 2017 expenditures (driven by the shift in funding of certain Medicaid expenditures to the Medicaid program category), and Fiscal Year 2019 appropriations increased 2.1% over Fiscal Year 2018 appropriations.
- *Corrections and Youth Services* – Fiscal Year 2018 appropriations increased 4.2% over Fiscal Year 2017 expenditures, and Fiscal Year 2019 appropriations increased 1.6% over Fiscal Year 2018 appropriations.

The Act also modified certain components of the school funding formula to better distribute resources to districts with less capacity to raise revenues locally (see **SCHOOLS AND MUNICIPALITIES – Schools**) and limited increases in tuition and fees for two- and four-year higher education institutions.

The Executive Budget, the 2018-19 biennial appropriations Act and separate appropriations acts for the biennium included all necessary debt service and lease rental payment appropriation authority related to State debt obligations.

The foregoing appropriations were based upon available balances and estimated GRF revenue for the biennium as follows:

Estimated GRF Revenue 2018-19 Biennium ($ in billions)

Fiscal Year 2017 Actual Revenue	Fiscal Year 2018 Est. Revenue	% Change Over Fiscal Year 2017 Actual Revenue	Fiscal Year 2019 Est. Revenue	% Change Over Fiscal Year 2018 Est. Revenue	2018-19 Biennium Total Revenue
$34.2	$32.3	-5.5%	$33.3	3.2%	$65.6

Potentially non-recurring sources of revenues reflected in the 2018-19 biennial appropriations Act included $84.5 million in transfers to the GRF from non-GRF funds, $200 million from unclaimed funds, $31 million from the sale of prison farmland, and $20 million from a tax amnesty program.

The 2018-19 biennial appropriations Act reflected certain tax law changes, resulting in an estimated net GRF revenue increase of $12.8 million in Fiscal Year 2018 and an estimated net GRF revenue decrease of $30.8 million in Fiscal Year 2019, including, among others:

- Reduced the number of personal income tax brackets from nine to seven in tax year 2017 and for certain low income taxpayers completely exempted the first $10,500 of taxable income, with increasing bracketed base rates and percentages up to a maximum on incomes over $210,600 of $8,073 plus 4.997% on the amount over $210,600. (See **TAX LEVELS AND TAX BASES** – **Personal Income Tax**.)
- Increased on a temporary basis the percent of GRF tax revenues deposited into the public library fund to 1.68% from 1.66% in each of Fiscal Years 2018 and 2019.
- Increased the State personal income tax deduction from $2,000 to $4,000 for contributions to accounts for college savings and care for disabled individuals.
- Authorized a one-time sales tax holiday on the purchase of clothing and school supplies in August 2018 (separate legislation enacted by the General Assembly authorized a sales tax holiday in August 2017).

The 2018-19 biennial appropriations Act also reflected:

- The creation of a new health insuring corporation provider assessment, the revenues of which are being deposited into a non-GRF dedicated purpose fund, to fully replace the forgone GRF sales tax revenue resulting from the federal policy ruling by the Centers for Medicare and Medicaid Services (CMS) that Ohio's sales tax on Medicaid managed care organizations was impermissible as a means of generating revenues to draw federal matching dollars. The GRF revenue loss was estimated to be approximately $600 million in each of Fiscal Years 2018 and 2019.
- Increased the portion of the commercial activity tax deposited into the GRF (estimated at $175 million in Fiscal Year 2018 and $179 million in Fiscal Year 2019) from 75% to 85% to more closely match the amounts needed to make compensating payments to school districts and local governments in connection with the prior phase-out of the tangible personal property tax. The requirement to transfer funds in excess of the compensating payments formula to the GRF at the end of each Fiscal Year remained unchanged. (See **TAX LEVELS AND TAX BASES** – **Property Tax**.)

As is customary at the beginning of the second year of a fiscal biennium, OBM in July 2018 revised its Fiscal Year 2019 GRF revenue forecast to reflect updated economic assumptions, actual Fiscal Year 2018 revenue performance, and certain minor tax law adjustments enacted by the General Assembly after adoption of the 2018-19 biennial appropriations Act. As part of this revision, OBM increased its estimated Fiscal Year 2019 GRF tax revenue forecast by $531.1 million, a 2.4% increase compared to the original Fiscal Year 2019 tax revenue forecast. This increase in forecasted tax revenues was largely within the personal income tax (increased by $379.5 million or 4.5%) and the sales and use tax (increased by $129.0 million or 1.3%). Effective January 1, 2019, personal income tax employer withholding rates were reduced by 3.3% in order to fully reflect the income tax rate reductions enacted in the 2016-17 biennial budget. This was estimated to result in a one-time $148.5 million reduction to personal income tax revenue in Fiscal Year 2019. Fiscal Year 2020 personal income tax revenue was not affected as the reduction in withholding was offset by reduced income tax refunds as final returns were filed for tax year 2019.

*Fiscal Year 2019 Financial Results***.** The State ended Fiscal Year 2019 with GRF cash and fund balances of $1.54 billion and $1.15 billion, respectively. Of that ending GRF fund balance, the State carried forward $834.0 million, including $168.8 million reserved to maintain the statutory target of one-half of one percent of Fiscal Year 2019 GRF revenues as an ending fund balance, and transferred $172.0 million to the H2Ohio fund (see **Current Biennium** below for discussion of this fund), $31.0 million to the statewide treatment and prevention fund, $39.0 million to the emergency purposes and disaster services funds, $20.0 million to the school bus purchase fund, $19 million to the tobacco use prevention fund, and $31.4 million across six other smaller purposes.

Current Biennium

Consistent with State law, the Governor's Executive Budget for the 2020-21 fiscal biennium was released on March 15, 2019 and introduced in the General Assembly. After extended hearings and review, the 2020-21 biennial appropriations Act, which was preceded by a 17-day interim appropriations act, was passed by the General Assembly and signed by the Governor (with selective vetoes) on July 18, 2019. Reflecting the tax law changes described below and an underlying economic forecast prepared in the first half of 2019, that Act provides for the GRF appropriations outlined below. The underlying economic forecast does not take into account the possible economic effects of the outbreak as described below under "Outbreak of COVID-19".

GRF Appropriations 2020-21 Biennium ($ in billions)

Fiscal Year 2019 Expenditures	Fiscal Year 2020 Appropriations	% Change Over Fiscal Year 2019 Expenditures	Fiscal Year 2021 Appropriations	% Change Over Fiscal Year 2020 Appropriations	2020-21 Biennium Total Appropriations
$32.7	$34.0	4.0%	$36.0	6.0%	$70.0

Major program categories reflect the following GRF appropriation changes (excluding GRF debt service appropriations):

- *Medicaid* - Fiscal Year 2020 appropriations increase 3.3% over Fiscal Year 2019 expenditures, and Fiscal Year 2021 appropriations increase 11.8% over Fiscal Year 2020 appropriations.
- *Elementary and Secondary Education* – including transfers from the GRF in support of student wellness and success, Fiscal Year 2020 appropriations increase 3.9% over Fiscal Year 2019 expenditures, and Fiscal Year 2021 appropriations increase 0.2% over Fiscal Year 2020 appropriations.
- *Higher Education* – Fiscal Year 2020 appropriations increase 4.6% over Fiscal Year 2019 expenditures, and Fiscal Year 2021 appropriations increase 2.6% over Fiscal Year 2020 appropriations.
- *Mental Health and Developmental Disabilities* – excluding Medicaid program services, Fiscal Year 2020 appropriations decrease 1.4% over Fiscal Year 2019 expenditures, and Fiscal Year 2021 appropriations increase 2.8% over Fiscal Year 2020 appropriations.
- *Corrections and Youth Services* – Fiscal Year 2020 appropriations increase 4.0% over Fiscal Year 2019 expenditures, and Fiscal Year 2021 appropriations increase 3.5% over Fiscal Year 2020 appropriations.

The 2020-21 biennial appropriations Act also created the H2Ohio fund to pay for water quality projects in Lake Erie and across Ohio's rivers, lakes and waterways. The H2Ohio fund was initially funded by a $172 million transfer from the Fiscal Year 2019 GRF ending fund balance. The Act also requires that 50 percent of the Fiscal Year 2021 GRF surplus, if any, be transferred to the H2Ohio fund with the other 50 percent transferred to the Budget Stabilization Fund.

The Executive Budget, 17-day interim appropriations act, the 2020-21 biennial appropriations Act and separate appropriations acts for the biennium all included necessary debt service and lease rental payment appropriation authority related to State debt obligations for the entire biennium.

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The foregoing appropriations were based upon available balances and estimated GRF revenue for the biennium and have been adjusted with updated revenue forecasts as of June 10, 2020 as follows:

Estimated State & Federal GRF Revenue 2020-21 Biennium ($ in billions)

Fiscal Year 2019 Actual Revenue	Fiscal Year 2020 Est. Revenue	% Change Over Fiscal Year 2019 Actual Revenue	Fiscal Year 2021 Est. Revenue	% Change Over Fiscal Year 2020 Est. Revenue	2020-21 Biennium Total Revenue
$33.8	$33.2	-1.6%	$36.0	8.5%	$69.3

The 2020-21 biennial appropriations Act reflects the following tax policy and allocation changes, among others, that are estimated to result in a net GRF revenue decrease of $410 million in Fiscal Year 2020 and $177 million in Fiscal Year 2021:

- An across-the-board 4.0% reduction in State personal income tax rates and elimination of the bottom two income tax brackets (effective in tax year 2019), coupled with a freeze on the indexing of the income tax brackets (through tax year 2020). The tax bracket changes eliminate any tax liability for individuals with taxable income less than $21,750.
- Modifies eligibility for various means-tested State personal income tax credits such that high-income taxpayers with little non-business income are not eligible for the tax credits (effective tax year 2019).
- Creates two new non-refundable tax credits, one for lead abatement expenses capped at $5 million annually (effective in tax year 2020) and one for Qualified Opportunity Zone investments that is limited to no more than $50 million per fiscal biennium (effective in tax year 2019).
- Increases the legal age to purchase tobacco products from 18 to 21 years old and creates a tax on the volume of nicotine-containing vapor products (effective October 2019).
- Modifies the definition of substantial nexus with Ohio in accordance with *South Dakota v. Wayfair, Inc.* for purposes of collecting the sales and use tax on retail sales through "marketplace facilitators" (effective October 2019).
- Increases on a temporary basis the percent of GRF tax revenues deposited into the local government fund to 1.68% from 1.66% in each of Fiscal Years 2020 and 2021.
- Increases on a temporary basis the percent of GRF tax revenues deposited into the public library fund to 1.70% from 1.66% in each of Fiscal Years 2020 and 2021.

Outbreak of COVID-19

As widely reported, the outbreak of COVID-19, a new strain of coronavirus that can result in severe respiratory disease, was first detected in December of 2019, and has spread across six continents impacting many countries, including the United States. COVID-19 has been declared a pandemic by the World Health Organization. The COVID-19 outbreak is altering the behavior of businesses and people in a manner that is expected to have negative effects on global and local economies, including the State. In response to the public health crisis, Governor DeWine and the Director of the Ohio Department of Health ("ODH") have taken certain actions to limit the spread of the virus and its impact on the State's local communities and health care services, including the declaration of a state of emergency in the State on March 9, 2020 and the closure of all non-essential businesses from 11:59 p.m. on March 23, 2020, through 11:59 p.m. on April 6, 2020. This order was extended on April 2, 2020 closing all non-essential businesses through May 1, 2020. On April 16, 2020, Governor DeWine announced that the State will begin a phased-in reopening of these businesses starting May 1, 2020. The reopening plan is gradual and fact-driven, in an attempt to minimize the health risk to business owners, employees, and their customers.

The spread of the COVID-19 virus is unprecedented as it relates to the world economy, leading to increased uncertainty. As more accurate information on the nature and impact of COVID-19 becomes available, State economic forecasts will be adjusted to take into account current immediate trends to enable the State to anticipate the effects on the State economy.

On March 23, 2020, the Governor announced the following actions intended to mitigate a portion of the economic effect of the COVID-19 outbreak on the State's financial position by reducing non-essential expenditures: (1) an immediate hiring freeze for all executive agencies, boards, and commissions with exceptions for positions that provide a direct response to the COVID-19 pandemic, safety and security, and direct care or institutional services, (2) a freeze on pay increases and promotions for State unclassified and exempt staff, (3) a freeze on new contract services for the State, except for those services that are necessary for the emergency response, and (4) that state agencies work to cut spending not related to pandemic response or other essential government functions up to 20% for the remainder of Fiscal Year 2020 and for Fiscal Year 2021.

On March 25, 2020 the State legislature passed House Bill 197 which became effective immediately upon signature of the Governor on March 27, 2020. That legislation enacts numerous provisions to assist with the COVID-19 pandemic including the alignment of the State's 2019 and first quarter 2020 tax filing dates from April 15, 2020 to July 15, 2020 to coincide with the same extended Federal tax filing deadlines. House Bill 197 also authorized transfers from the State's $2.7 billion Budget Stabilization Fund (BSF) in Fiscal Year 2020 to cover any budget shortfalls should it become necessary.

The State is also taking additional steps to mitigate a portion of the economic effect of the COVID-19 outbreak by matching small businesses with economic supports and assistance and matching unemployed workers with skill building programs for technology-businesses.

On March 27, 2020 President Trump signed the Coronavirus Aid, Relief and Economic Security Act ("CARES Act") to address the economic disruption caused by the COVID-19 pandemic. While the CARES Act includes a wide range of assistance measures for individuals, businesses, and state and local governments, it also provides direct payment aid to states (and within each state to eligible local governments), and the State has been directly allocated a minimum of $2.49 billion of the total $4.53 billion granted by the Federal Government to the State and its eligible local governments. Funds can be used for costs that are necessary expenditures incurred due to COVID-19.

The latest revenue figures and economic forecasting published in the Monthly Financial Report released on June 10, 2020 for collections through May of this calendar year evidence that the COVID-19 pandemic in the United States has impacted the Ohio economy. Total General Revenue Fund tax receipts finished the month $271.3 million (-13%) below estimate, primarily from sales and use tax revenues falling $167.3 million (-17.6%) below monthly estimate and personal income tax revenue being $91.36 million (-15.1%) short of projections. The personal income tax was once again impacted by the economic downturn (-15.1%). However, unlike April, the timing effects caused by postponement of certain income tax payment deadlines did not appear to have a material impact on May revenue; instead, the major impact stems from a decline in employer withholding tax collections.

Overall, May GRF receipts totaled $2.77 billion and were $52.0 million (-1.8%) below estimate, boosted by non-tax receipts finishing the month $219.3 million (30%) above projection, mostly from federal grants being $217.9 million (29.9%) above estimate. For Fiscal Year 2020 to date through May, actual GRF revenues are $694.8 million (-2.3%) below estimate, while total GRF sources, net of transfers are $686.3 million (-2.2%) lower than estimated.

To balance the State budget in Fiscal Year 2020 while responding to the COVID-19 pandemic, agencies across the State have deviated from their original disbursement plans. Some agencies have increased spending in targeted areas to mitigate the health and economic effects of COVID 19. Simultaneously, on May 5, 2020, Governor DeWine announced that planned State spending will be cut by $775 million prior to June 30, 2020. The cuts include the following reductions: $210 million in Medicaid spending; $300 million in K-12 education spending; $110 million in higher education spending; $55 million in other education spending; and $100 million in other state agencies and programs spending. The State will also continue the previously announced hiring freezes, travel limitations, and contracting restrictions. Governor DeWine also relayed that the State does not anticipate making a transfer from the Budget Stabilization Fund over the last two months of Fiscal Year 2020 because of these reductions.

Additionally, the COVID-19 outbreak caused a sudden, unprecedented spike in unemployment and furloughs during March, primarily starting in the middle of the month. For the month of May, withholding tax payments fell short of estimate by $103.8 million (14.6%). Compared to last April, withholding was down $155.4 million (20.4%). Withholding is, as of the end of May, $131.0 million (-1.5%) below estimate this fiscal year. However, this year-to-year comparison is somewhat exaggerated by there being one less large payment day this May and by the effects of tax policy changes. The fiscal year 2020-2021 budget bill (Am. Sub. House Bill 166) enacted a four percent reduction in personal income tax rates effective with tax year 2019; consistent with this rate cut, a four percent employer withholding rate reduction took effect in January 2020.

As a result of this spike in unemployment, Ohio's Unemployment Trust Fund balance was reduced by 80% between March 1, 2020 and May 31, 2020. In anticipation of this increased demand, the Ohio Department of Job and Family Services has applied for federal assistance and is likely to begin drawing funds prior to the end of June. The Ohio General Assembly is currently determining the State's method of repayment for this federal assistance, and although not necessarily indicative of the current determination, the most recent prior draw was repaid, in part, from increased employer contribution to the Unemployment Trust Fund. Statistics on unemployment in Ohio as well as weekly information about initial jobless claims are available on the Ohio Department of Jobs and Family Services website which can be located at http://jfs.ohio.gov/.

May GRF disbursements, across all uses, totaled $3.0 billion and were $226.6 million (8.3%) above estimate. This variance was primarily attributable to above estimate disbursements in the Medicaid category and was partially offset by expenditures that were below estimate in the Primary and Secondary Education category. On a year-over-year basis, May total uses were $125.9 million (4.5%) higher than those of the same month in the previous fiscal year, with an increase in the Property Tax Reimbursements category largely responsible for the difference. For more information, please refer to the Monthly Financial Report dated June 10, 2020.

On June 1, 2020, OBM updated revenue projections for Fiscal Year 2021 which indicate that available state revenue receipts and balances in the GRF are projected to be approximately $2.43 billion less than previously anticipated. This estimated shortfall is $200 million less than the reserve held in the BSF as stated above. The projection does not include any offset for savings the State may realize from additional budgetary responses, such as, but not limited to, those contemplated below or the temporary 6.2 percentage-point increase in Federal Medical Assistance Percentages, (federal revenue receipts), which are used in determining the amount of Federal payments to the State for medical services. Details regarding the updated Fiscal Year 2021 revenue projections, as well as additional May expenditure data, are included in the OBM Monthly Financial Report released on June 10, 2020.

In response to these updated projections and in addition to the budgetary controls already in place, OBM and the Department of Administrative Services ("DAS") plan to implement immediate and aggressive cost savings measures to reduce expenditures by state agencies, boards, and commissions. Such measures include requesting the General Assembly to implement an amendment freezing pay and step advancement of exempt employees, instituting mandatory cost savings programs for exempt employees for fiscal year 2021, reducing wages of exempt employees by approximately 3.8% and salaries of cabinet directors by approximately 4%. Further, organizations representing the State's collective bargaining employees are being asked to meet by June 15, 2020 to discuss ways to reduce personnel costs. OBM and DAS will continue to partner to identify personnel and cost containment strategies to balance the state budget.

As noted in the previous section, the State is effectively precluded by its Constitution from ending a Fiscal Year or a biennium in a "deficit" position. If needed, the State has additional executive and legislative measures available to safeguard against such a result. OBM continually monitors and analyzes revenues, expenditures, and related developments (including pending litigation) for inclusion in its Monthly Financial Report, which is accessible at https://www.obm.ohio.gov/Budget/monthlyfinancial/.

Cash Flow

Because GRF cash receipts and disbursements do not precisely coincide, temporary GRF cash flow deficiencies often occur in some months, particularly the middle months, of a Fiscal Year. Statutory provisions provide for effective management of cash flow by permitting the adjustment of payment schedules (as was done during some prior Fiscal Years) and the use of the Total Operating Fund (TOF). The State has not done and does not do external revenue anticipation borrowing.

The TOF includes the total consolidated cash balances, revenues, disbursements and transfers of the GRF and several other specified funds (including the BSF). The TOF cash balances are consolidated only for the purpose of meeting cash flow requirements, and, except for the GRF, a positive cash balance must be maintained for each discrete fund included in the TOF. The GRF is permitted to incur a temporary cash deficiency by drawing upon the available consolidated cash balance in the TOF. The amount of that permitted GRF cash deficiency at any time is limited by statute to 10% of GRF revenues for the then preceding Fiscal Year. The State plans for and manages monthly GRF cash flow deficiencies within each Fiscal Year and those deficiencies have been within the TOF limitations discussed above.

STATE DEBT

General

The incurrence or assumption of debt by the State without a popular vote is, with limited exceptions, prohibited by the State Constitution. The State is authorized to incur debt limited in amount to $750,000 to cover casual deficits or to address failures in revenues or to meet expenses not otherwise provided for. The Constitution expressly precludes the State from assuming the debts of any county, city, town or township, or of any corporation. (An exception in both cases is for debts incurred to repel invasion, suppress insurrection, or defend the State in war.) The Constitution provides that "Except the debts above specified…no debt whatever shall hereafter be created by, or on behalf of the state."

By 20 constitutional amendments approved from 1921 to present, Ohio voters have authorized the incurrence of State general obligation debt and the pledge of taxes or excises to its payment, all related to the financing of capital facilities, except for three that funded bonuses for veterans, one to fund coal technology research and development, and one to fund specified research and development activities. Currently, tax supported general obligation debt of the State is authorized to be incurred for the following purposes: highways, local infrastructure, coal development, natural resources and parks, higher education, common schools, conservation, and research and development. Authorizations for site development and veterans compensation purposes have been fully exhausted or expired. Although supported by the general obligation pledge, highway debt is also backed by a pledge of and has always been paid from the State's motor fuel taxes and other highway user receipts that are constitutionally restricted in use to highway related purposes.

State special obligation debt, the owners or holders of which are not given the right to have excises or taxes levied by the General Assembly to pay principal and interest, is authorized for purposes specified by Section 2i of Article VIII of the Constitution. The Treasurer of State currently issues the special obligations authorized under that Section 2i for parks and recreation and mental health facilities, and for facilities to house branches and agencies of State government and their functions, including: State office buildings and facilities for the Department of Administrative Services (DAS) and others, the Ohio Department of Transportation (ODOT), correctional and juvenile detention facilities for the Departments of Rehabilitation and Correction (DRC) and Youth Services (DYS), various cultural facilities, and formerly for the Department of Public Safety (DPS). Debt service on all these special obligations is paid from GRF appropriations, with the exception of debt issued for ODOT and DPS facilities which is paid from highway user receipts. All of those debt service payments are subject to biennial appropriations by the General Assembly pursuant to leases or other agreements entered into by the State.

Certificates of Participation (COPs). State agencies also have participated in buildings and equipment, information systems and non-highway transportation projects that have local as well as State use and benefit, in connection with which the State has entered into lease-purchase agreements with terms ranging from 8 to 20 years. Certificates of Participation (COPs) have been issued in connection with those agreements that represent fractionalized interests in and are payable from the State's anticipated lease payments. The maximum annual payment from GRF appropriations under those existing agreements is \$45.4 million in Fiscal Year 2023 and the total GRF-supported principal amount outstanding is \$277.9 million. Payments by the State are subject to biennial appropriations by the General Assembly with the lease terms subject to automatic renewal for each biennium for which those appropriations are made. The approval of the OBM Director and either the General Assembly or the State Controlling Board is required if COPs are to be publicly offered in connection with those agreements.

Revenue Bonds. Certain State agencies issue revenue bonds that are payable from revenues from or relating to revenue producing facilities, such as those issued by the Ohio Turnpike and Infrastructure Commission. As confirmed by judicial interpretation, such revenue bonds do not constitute "debt" under the constitutional provisions described above. The Constitution authorizes State bonds for certain economic development and housing purposes (the latter issued by the Ohio Housing Finance Agency) to which tax moneys may not be obligated or pledged. See the discussion of expanded housing finance authority, and permitted pledges to it, below under **Additional Authorizations**.

Tax Credits in Support of Other Long-Term Obligations. The State has authorized the issuance of fully refundable tax credits in support of "credit-collateralized bonds" issued from time to time by the Columbus-Franklin County Finance Authority to provide funding for the Ohio Capital Fund (OCF) to promote venture capital investment in Ohio and any additional bonds that may be issued to refinance those outstanding bonds or provide additional funding for that purpose. Those tax credits may be claimed by the bond trustee for the purpose of restoring the bond reserve fund for those credit-collateralized bonds in the event it is drawn upon and its required balance is not restored from other sources. Those credits may not be claimed after June 30, 2036, and the maximum amount of tax credits that may be claimed is \$20 million in any fiscal year and \$380 million in total. The bond trustee has made claims for tax credits totaling \$7.5 million in Fiscal Year 2017, \$15.4 million in Fiscal Year 2018, \$13.5 million in Fiscal Year 2019 and \$7.5 million in Fiscal Year 2020. The highest annual payment for outstanding credit-collateralized bonds is \$19.2 million in Fiscal Year 2020 and the total principal amount outstanding for those bonds is \$125.8 million. Proceeds of the OCF bonds fund investments in venture capital funds to promote investment in seed and early-stage Ohio-based business enterprises.

Prior Economic Development and Revitalization Obligations. Prior to the February 1, 2013 granting of a 25-year franchise on the State's spirituous liquor system to JobsOhio, there were outstanding \$725.0 million of

State bonds and notes secured by a pledge of the State's profits from the sale of spirituous liquor. In connection with the granting of that franchise, provision was made for the payment of all the debt service on those bonds and notes which are defeased and no longer outstanding obligations of the State (see **FISCAL MATTERS – Recent and Current Finances – Recent Biennia - 2012-13)**. Those bonds and notes were originally issued to fund a statewide economic development program that assisted in the financing of facilities and equipment for industry, commerce, research and distribution, including technology innovation, by providing loans and loan guarantees. Under its franchise agreement with JobsOhio, the State may not issue additional obligations secured by a pledge of profits from the sale of spirituous liquor during the 25-year term of that franchise.

Obligations and Funding Commitments for Highway Projects Payable from Highway-Related Non-GRF Funds. As described above, the State issues general obligations for highway infrastructure and special obligations for ODOT and DPS transportation facilities that are paid from the State's motor fuel tax and other highway user receipts that are constitutionally restricted in use to highway related purposes. In addition, the State has and expects to continue financing selected highway infrastructure projects by issuing federal highway grant anticipation revenue (GARVEE) bonds and entering into agreements that call for debt service payments to be made from federal Title 23 transportation funds allocated to the State, subject to biennial appropriations by the General Assembly. The highest annual State payment under those agreements in the current or any future fiscal year is $182.8 million in Fiscal Year 2020. In the event of any insufficiency in the anticipated federal allocations to make payments on GARVEE bonds, the payments are to be made from any lawfully available moneys appropriated to ODOT for the purpose.

In December 2014, ODOT also entered into its first public-private agreement to provide "availability payments" in support of the development and operation of a State highway improvement project. Those availability payments commenced in December 2018 and are paid from non-GRF funds available to ODOT remaining after the payment of debt service on highway general obligations, ODOT special obligations and GARVEE bonds. The partial year availability payment in Fiscal Year 2019 was $14.3 million, with availability payments estimated to increase modestly each year from $25.7 million in Fiscal Year 2020 to a maximum payment of $39.4 million in Fiscal Year 2053. Availability payments are subject to biennial appropriation by the General Assembly with the public-private agreement subject to automatic renewal for each biennium if and when those availability payments are appropriated for that biennium.

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Variable Rate Debt

The State currently has $352,550,000 in outstanding variable rate debt as follows with liquidity provided by the State for all of these issues:

Dated Date	Outstanding	Purpose/Series	Rate Period	Final Maturity
11/29/2001	$18,200,000	Infrastructure, 2001B	Weekly	8/1/2021
12/15/2003	54,400,000	Common Schools, 2003D	Weekly	3/15/2024
3/3/2004	24,760,000	Infrastructure Refunding, 2004A	Weekly	2/1/2023
4/1/2005	60,750,000	Common Schools, 2005A/B	Weekly	3/15/2025
6/7/2006	84,820,000	Common Schools, 2006B/C	Weekly	6/15/2026
10/26/2016	64,620,000	DRC Prison Facilities, 2016B/C	Weekly	10/1/2036
8/7/2019	45,000,000	DRC Prison Facilities, 2019C	Weekly	10/1/2039

Interest Rate Swaps

As part of its debt management, the State is also party to the following floating-to-fixed interest rate swap agreements with a total notional amount currently outstanding of $242,930,000:

Outstanding Notional Amount	Related Bond Series	State Pays	State Receives	Counterparty	Effective Date	Termination Date
$18,200,000	Infrastructure 2001B	4.630%	SIFMA[1]	JP Morgan/ Wells Fargo	11/29/2001	8/1/2021
54,400,000	Common Schools 2003D	3.414%	LIBOR[2]	JP Morgan/ Wells Fargo	9/14/2007	3/15/2024
24,760,000	Infrastructure 2004A Refunding	3.510%	LIBOR[2]	Wells Fargo	3/3/2004	2/1/2023
60,750,000	Common Schools 2005A/B	3.750%	LIBOR[2,3]	JP Morgan	3/15/2007	3/15/2025
84,820,000	Common Schools 2006B/C	3.202%	LIBOR[2]	US Bank/ RBC	6/15/2006	6/15/2026

[1] Securities Industry and Financial Markets Association (SIFMA) weekly variable rate index.
[2] Variable interest rate based on a percentage of one-month London Inter-Bank Offered Rate (LIBOR) plus a fixed increment.
[3] Variable interest rate based on 62% of 10-year LIBOR beginning September 15, 2014.

For all its swap agreements, the State has established minimum uncollateralized counterparty rating thresholds of AA-/Aa3. Under each of these agreements, the counterparty is required to progressively post collateral securing the State's position if the counterparty's credit ratings fall below these minimum thresholds.

Constitutional Limitation on Annual Debt Service

A 1999 constitutional amendment provides an annual debt service "cap" applicable to most future issuances of State general obligations and other State direct obligations payable from the GRF or net State lottery proceeds. Generally, new obligations may not be issued if debt service for any future Fiscal Year on those new and the then outstanding obligations of those categories would exceed 5% of the total of estimated GRF revenues (excluding GRF receipts from the American Recovery and Reinvestment Act of 2009) plus net State lottery proceeds for the Fiscal Year of issuance. Those direct obligations of the State include general obligations and special obligations that are paid from the State's GRF, but exclude (i) general obligation debt for third frontier research and development, development of sites and facilities, and veterans compensation, and (ii) general obligation debt payable from non-GRF funds (such as highway bonds that are paid from highway user receipts). Pursuant to the implementing legislation, the Governor has designated the OBM Director as the State official responsible for making the 5% determinations and certifications. Application of the 5% cap may be waived in a particular instance by a three-fifths vote of each house of the Ohio General Assembly and may be changed by future constitutional amendments.

The following table presents a current summary of State debt authorizations and the principal that has been issued and is outstanding against those authorizations, including the Series W Highway Bonds. The General Assembly has appropriated sufficient moneys to meet debt service requirements for the current biennium (ending June 30, 2021) on all of the obligations included in this and the accompanying tables.

	Authorized by General Assembly	Issued(a)	Outstanding(b)
Obligations Payable from the GRF			
General Obligations			
Coal Development(c)	$260,000,000	$254,000,000	$34,475,000
Infrastructure(d,e)	4,425,000,000	4,231,986,136	1,784,725,000
Natural Resources(f)	492,000,000	484,620,000	146,395,000
Common School Facilities(e)	5,645,000,000	5,370,000,000	2,644,825,000
Higher Education Facilities	4,453,000,000	4,130,000,000	2,248,495,000
Conservation(g)	700,000,000	600,000,000	308,860,000
Research & Development(h)	1,200,000,000	971,000,000	363,735,000
Site Development	150,000,000	150,000,000	18,065,000
Veterans Compensation(i)	200,000,000	83,910,000	25,190,000
		Total:	$7,574,765,000
Special Obligations			
DAS Facilities	$2,069,700,000	$1,991,960,000	$559,310,000
DRC Prison Facilities(e)	2,462,000,000	2,232,500,000	537,695,000
DYS Facilities	400,000,000	400,000,000	119,305,000
Cultural & Sports Facilities	725,000,000	639,690,000	118,395,000
Mental Health Facilities	1,850,000,000	1,667,085,000	185,360,000
Parks & Recreation Facilities	1,042,400,000	828,000,000	385,390,000
		Total:	$1,905,455,000
Obligations Payable from Non-GRF Sources(j)			
Highway User Receipts			
G.O. Highway(k)	$3,740,000,000	$3,381,000,000	$1,003,005,000
ODOT Facilities	385,000,000	326,590,000	141,580,000
DPS Facilities	140,285,000	140,285,000	1,530,000
		Total:	$1,146,115,000
Federal Transportation Grants			
ODOT GARVEE Highway(l)	n.a.	$2,755,720,000	$907,565,000

(a) Excludes refunding bonds; includes bonds refunded; as of June 4, 2020.
(b) Excludes refunded bonds; includes refunding bonds; as of June 4, 2020.
(c) Not more than $100,000,000 may be outstanding at any time.
(d) Not more than $5,625,000,000 may be issued with the annual issuance currently limited to no more than $175,000,000 in each Fiscal Year beginning in Fiscal Year 2018 through Fiscal Year 2022 and $200,000,000 in each Fiscal Year beginning in Fiscal Year 2023 through Fiscal Year 2027, plus any obligations unissued from previous Fiscal Years.
(e) Includes adjustable rate bonds.
(f) Not more than $50,000,000 may be issued in any Fiscal Year and not more than $200,000,000 may be outstanding at any time. Issued amount includes $130,000 in refunding bonds in excess of the principal amount of the bonds refunded.
(g) Not more than $50,000,000 may be issued in any Fiscal Year plus any obligations unissued from previous Fiscal Years and not more than $400,000,000 may be outstanding at any time.
(h) Not more than $1,200,000,000 may be issued with the annual issuance now limited to no more than $175,000,000 in any Fiscal Year plus any obligations unissued from previous Fiscal Years.
(i) Constitutional authorization was self-implementing and did not require further General Assembly authorization. No more new obligations may be issued under this authorization.
(j) See discussion above of "availability payments" under ODOTs first public-private agreement, which payments are expected to be made from biennial appropriations of non-GRF funds available to ODOT and remaining after the payment of debt service on highway general obligations, special obligations and GARVEE bonds shown above.
(k) Not more than $220,000,000 may be issued in any Fiscal Year plus any amount unissued from previous Fiscal Years, and not more than $1,200,000,000 may be outstanding at any time.
(l) Debt service on these "GARVEE" bonds is paid from federal transportation grants apportioned to the State (Title 23 of the U.S. Code).

The following table shows total debt service by Fiscal Year on State obligations payable from the GRF:

Annual Debt Service Requirements on State Obligations
Paid from the GRF

	General Obligations			Special Obligations			Total GRF Debt Service(f)		
FY	**Education (a,b,e)**	**Infra-structure(b,e)**	**All Other(c,e)**	**DAS Facilities(e)**	**DRC Facilities(b)(e)**	**All Other(d)(e)**	**Principal(e)**	**Interest(e)**	**Total(e)**
2020	$736,836,785	$226,911,841	$173,021,954	$83,524,063	$62,980,453	$131,591,739	$975,085,000	$439,781,835	$1,414,866,835
2021	742,960,830	226,163,689	170,259,745	87,472,954	68,839,764	125,146,467	1,000,910,000	419,933,448	1,420,843,448
2022	705,840,083	217,971,114	149,129,552	77,636,624	68,135,938	112,808,306	955,195,000	376,326,619	1,331,521,619
2023	638,875,808	208,587,039	137,245,752	74,800,121	64,075,501	112,744,109	901,295,000	335,033,330	1,236,328,330
2024	539,554,820	190,769,046	116,861,478	64,754,091	62,226,749	107,481,019	785,005,000	296,642,203	1,081,647,203
2025	468,162,821	182,391,229	95,492,682	59,250,261	57,600,781	101,012,225	701,645,000	262,264,999	963,909,999
2026	398,335,695	168,148,081	89,411,808	36,592,478	34,124,608	83,437,925	577,225,000	232,825,595	810,050,595
2027	342,617,829	153,351,871	71,111,323	36,642,178	34,256,418	73,917,625	504,040,000	207,857,244	711,897,244
2028	321,394,939	153,189,746	69,022,286	36,699,391	34,212,231	67,521,050	496,995,000	185,044,643	682,039,643
2029	321,481,174	144,448,485	53,126,143	36,759,266	34,248,728	57,187,875	485,025,000	162,226,670	647,251,670
2030	331,767,530	127,393,277	34,329,125	32,444,946	31,387,656	52,666,094	468,490,000	141,498,627	609,988,627
2031	332,020,127	127,222,141	29,863,400	29,707,975	31,404,212	40,609,250	471,840,000	118,987,105	590,827,105
2032	307,704,913	103,472,200	20,180,350	29,716,324	28,712,200	32,891,000	424,875,000	97,801,987	522,676,987
2033	240,467,725	94,406,000	10,680,200	27,272,006	28,643,754	23,491,250	346,475,000	78,485,935	424,960,935
2034	216,826,625	83,579,750	7,310,950	23,612,550	28,905,732	10,624,000	308,810,000	62,049,607	370,859,607
2035	192,974,250	59,967,125	2,966,250	23,614,175	25,741,228	10,624,625	268,870,000	47,017,653	315,887,653
2036	168,783,750	59,948,625	-	17,637,750	25,766,650	10,624,250	249,020,000	33,741,025	282,761,025
2037	145,666,000	48,555,875	-	17,635,375	20,167,912	10,622,000	220,225,000	22,422,162	242,647,162
2038	96,242,000	37,782,875	-	11,955,375	14,847,847	10,626,750	159,525,000	11,929,847	171,454,847
2039	48,268,500	24,817,875	-	11,954,875	7,128,105	10,622,125	98,235,000	4,556,480	102,791,480
2040	-	-	-	6,462,750	7,125,588	-	13,175,000	413,338	13,588,338
							$10,411,960,000	**$3,536,840,352**	**$13,948,800,352**

(a) Consists of common schools and higher education general obligation bonds.
(b) Includes estimated debt service on adjustable rate bonds at an assumed rate of 3%
(c) Includes natural resources, coal development, conservation, research and development, site development and veteran's compensation general obligation bonds
(d) Includes lease-rental bonds for mental health, parks and recreation, cultural and sports facilities, and facilities for the Department of Youth Services.
(e) Excludes refunded bonds; includes refunding bonds; as of June 4, 2020.
(f) Totals may not foot due to rounding.

The following table shows total debt service by Fiscal Year on certain State obligations payable from the indicated non-GRF revenues, including the Series W Highway Bonds:

Annual Debt Service Requirements on State Obligations
Paid from Non-GRF Revenues

	Highway User Receipts			GARVEE Federal Transportation Grants(c)
FY	**Highway G.O.**	**ODOT/DPS Facilities(a)**	**Total(b)**	
2020	$152,695,962	$18,084,200	$170,780,162	$182,767,446
2021	156,448,140	18,087,250	167,830,942	168,591,051
2022	153,638,402	16,522,000	162,606,052	123,812,125
2023	148,959,706	16,526,250	158,114,806	123,036,838
2024	145,287,227	16,520,500	154,619,777	122,294,650
2025	126,903,145	16,524,000	136,427,395	121,550,875
2026	97,068,050	16,520,000	106,771,300	85,765,750
2027	93,990,300	16,522,500	103,879,050	85,766,625
2028	90,867,050	16,519,750	100,981,800	85,768,750
2029	73,977,550	16,520,500	84,321,800	85,768,000
2030	54,616,500	16,518,000	65,187,000	61,672,625
2031	52,317,500	8,375,750	54,974,500	20,387,750
2032	34,823,750	8,379,000	37,712,750	20,392,375
2033	33,290,000	8,379,000	36,407,750	-
2034	18,131,250	-	13,098,750	-
2035	4,803,750	-	-	-

(a) Lease rental payments are paid from highway user receipts for these Ohio Department of Transportation and Department of Public Safety facilities.

(b) As of June 4, 2020.

(c) Debt service paid from federal transportation grants apportioned to the State under Title 23 of the U.S. Code.

Totals may not foot due to rounding.

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The following table shows the principal amount of those obligations that are currently scheduled to be outstanding as of July 1 of the indicated years, including the Series W Highway Bonds, as of June 4, 2020:

	Obligations Payable from the GRF			Non-GRF Obligations
Year	Education(a)	Other GO(b)	Special Obligations(c)	Highway User Receipts(d)
2020	$4,849,975,000	$2,681,445,000	$1,905,455,000	$1,146,115,000
2025	2,661,955,000	1,433,530,000	997,340,000	551,535,000
2030	1,464,310,000	606,230,000	490,510,000	151,665,000
2035	416,255,000	156,765,000	167,160,000	-

(a) Includes bonds for common school and higher education capital facilities.
(b) Includes natural resources, coal development, infrastructure improvement, conservation, research and development, site development and veterans compensation general obligation bonds.
(c) Includes lease-rental bonds for various State capital facilities.
(d) Includes general obligations for highways and lease-rental bonds for ODOT and DPS facilities.

The following tables show certain historical debt information and comparisons. These tables include only outstanding obligations of the State for which debt service is paid from the GRF.

Fiscal Year	Principal Amount Outstanding	Outstanding Debt Per Capita	Outstanding Debt as % of Annual Personal Income
1980	$1,991,915,000	$184	1.86%
1990	3,707,055,058	342	1.83
2000	6,308,680,025	556	1.94
2010	8,586,655,636	744	2.03
2011	8,996,752,848	779	1.99
2012	9,760,505,915	845	2.08
2013	9,263,358,266	800	1.94
2014	9,517,346,998	820	1.92
2015	9,354,508,600	805	1.81
2016	9,271,400,000	797	1.77
2017	9,450,790,000	810	1.73
2018	9,746,900,000	834	1.73(b)
2019	9,496,850,000	812(a)	1.68(b)

Fiscal Year	Debt Service Payable	Total GRF Revenue and Net State Lottery Proceeds	Debt Service as % of GRF Revenue and Lottery Proceeds	Debt Service as % of Annual Personal Income
1980	$187,478,382	$4,835,670,223	3.88%	0.18%
1990	488,676,826	12,230,682,298	4.00	0.24
2000	871,313,814	20,711,678,217	4.21	0.27
2010	710,284,236*	24,108,466,000**	2.95	0.17
2011	755,023,015*	26,777,133,000**	2.82	0.17
2012	692,776,090*	27,956,512,000	2.48	0.15
2013	1,204,775,861	30,361,815,000	3.97	0.25
2014	1,237,701,225	30,137,139,000	4.11	0.25
2015	1,278,258,664	32,463,100,000	3.94	0.25
2016	1,314,513,346	34,996,649,000	3.76	0.25
2017	1,328,276,711	35,218,700,000	3.77	0.24
2018	1,338,395,923	33,642,813,000	3.98	0.24(b)
2019	1,402,757,299	34,921,508,000	4.02	0.25(b)

(a) Based on July 2018 population estimate.
(b) Based on preliminary 2018 personal income data.
* Reduction is due in large part to the restructuring of certain GRF debt service payments resulting in net savings of $416.8 million in Fiscal Year 2010, $336.9 million in Fiscal Year 2011, and $449.3 million in Fiscal Year 2012.
** Excludes federal funds from the American Recovery and Reinvestment Act of 2009.

Recent Debt Authorizations

Only a portion of State capital needs can be met by direct GRF appropriations, so additional State borrowing for capital and other purposes has been and will continue to be required. For the 2019-20 capital biennium, the General Assembly approved $2.88 billion in new capital appropriations, with $2.48 billion of those new capital appropriations to be funded by GRF-supported debt authorizations, $60 million to be funded from non-GRF debt authorizations (for Ohio Department of Transportation maintenance facilities) and the remaining $342 million to be funded from cash. The following additional GRF-supported debt authorizations reflect all of the new 2019-20 capital appropriations:

General Obligation

- $475,000,000 for capital improvements for elementary and secondary public schools.
- $325,000,000 for local infrastructure projects.
- $437,000,000 for higher education facilities.
- $34,000,000 for natural resources facilities.
- $100,000,000 for conservation purposes.
- $2,000,000 for coal development purposes.
- $57,000,000 for highway development purposes.

Special Obligation

- $200,000,000 for prisons and local jails.
- $21,000,000 for youth services facilities.
- $130,500,000 for State administrative facilities.
- $84,000,000 for cultural facilities (including both arts and sports facilities).
- $193,000,000 for mental health facilities (including local projects).
- $201,400,000 for parks and recreation facilities (including local projects).

In addition to the above $475 million general obligation debt authorization for elementary and secondary public school improvements, the General Assembly also appropriated $75 million to be funded from the transfer of non-GRF development loan funds and $50 million from State lottery profits for elementary and secondary public school capital improvements.

Recent constitutional authorizations are:

- 2014 – authorizes an additional $1.875 billion of general obligation debt for public infrastructure as a ten-year extension of the existing local government infrastructure program authorized in 2005, with an increase in the annual issuance amount from $150 million to $175 million in the first five Fiscal Years and $200 million in each Fiscal Year thereafter.
- 2010 – authorizes the issuance of $700 million of State general obligation debt to renew and continue programs for research and development in support of Ohio industry, commerce, and business, with those obligations not subject to the 5% debt service cap described above. The authorization is in addition to the below-referenced 2005 constitutional amendment for the same purpose. The amount of all State general obligations that may be issued for, and the amounts of proceeds from those State general obligations that may be committed to, those research and development purposes, are limited to no more than $450 million total for the period including State Fiscal Years 2006 through 2011, no more than $225 million in Fiscal Year 2012 and no more than $175 million in any Fiscal Year thereafter, plus any amounts that in any prior Fiscal Year could have been but were not issued.
- 2009 – authorized the issuance of State general obligation debt to provide compensation to persons who have served in active duty in the United States armed forces at any time during the Persian Gulf, Afghanistan, and Iraq conflicts, with those obligations not subject to the 5% direct obligation debt service cap described above. Not more than $200 million in obligations could have been issued no later than December 31, 2013.
- 2008 – authorizes the issuance of State bonds for land conservation and revitalization purposes (including statewide brownfields clean-up). For each of the two purposes, the authorization is for not more than $50 million in principal amount to be issued in any Fiscal Year plus any amount unissued from previous Fiscal Years and not more than $200 million to be outstanding at any time. The bonds

for conservation purposes are general obligations, and those for revitalization purposes are special obligations payable from revenues and receipts designated by the General Assembly (previously a portion of the State's net liquor profits; see **FISCAL MATTERS – Recent and Current Finances – Recent Biennia - 2012-13**). The authorization is in addition to the 2000 constitutional amendment for the same purposes.

- 2005 – authorizes the issuance over ten years of $500 million of State general obligation debt in support of research and development, and $150 million of State general obligation debt for the development of sites for industry, commerce, distribution and research and development, with those obligations not subject to the 5% debt service cap described above. Also authorizes an additional $1.35 billion of general obligation debt for public infrastructure as a ten-year extension of the existing local government infrastructure program, with an increase in the annual issuance amount from $120 million to $150 million in the last five Fiscal Years, which continues to be subject to that 5% debt service cap.

- 2000 – authorizes the issuance of State bonds for land conservation and revitalization purposes (including statewide brownfields clean-up). For each of the two purposes, the amendment authorizes not more than $50 million in principal amount to be issued in any Fiscal Year plus any amount unissued from previous Fiscal Years and not more than $200 million to be outstanding at any time. The bonds for conservation purposes are general obligations, and those for revitalization purposes are special obligations payable from revenues and receipts designated by the General Assembly (previously a portion of the State's net liquor profits; see **FISCAL MATTERS – Recent and Current Finances – Recent Biennia - 2012-13**).

- 1999 – authorizes State general obligation debt to pay costs of facilities for a system of common schools throughout the state and for state-supported and state-assisted institutions of higher education. The amendment also provides for the 5% direct obligation debt service cap described above.

- 1995 – authorizes additional highway bonds and extends the local infrastructure bond program. For the latter, it authorized an additional $1.2 billion of State full faith and credit obligations to be issued over 10 years, with not more than $120 million to be issued in any Fiscal Year. The highway finance portion authorizes not more than $1.2 billion to be outstanding at any time and not more than $220 million to be issued in any Fiscal Year.

- 1994 – pledges the State's full faith and credit and taxing power to meet certain guarantees under the State's tuition credit program, a program that provides for the purchase of tuition credits which are guaranteed to cover a specified amount when applied to tuition and other eligible higher education costs. Under the amendment, to secure the tuition guarantees, the General Assembly shall appropriate money sufficient to offset any deficiency that occurs in the trust fund, at any time necessary to make payment of the full amount of any tuition payment or refund required by a tuition payment contract.

- 1990 – authorizes greater State and political subdivision participation in the provision of individual and family housing. This supplements the previous constitutionally authorized loans-for-lenders and other housing assistance programs, financed in part with State revenue bonds. The amendment authorizes the General Assembly to provide for State assistance for housing in a variety of ways, including State borrowing for the purpose by the issuance of obligations secured by a pledge of all or such portion of State revenues or receipts as it authorizes (but not by a pledge of the State's full faith and credit).

- 1985 – authorizes the issuance of general obligation debt to finance grants or make or guarantee loans for research and development of coal technology that will encourage the use of Ohio coal. Those grants or loans are available to any individual, association, or corporation doing business in the State or to any educational or scientific institution located in the State. Not more than $100 million may be outstanding at any time.

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ECONOMY AND EMPLOYMENT

Although manufacturing (including auto-related manufacturing) in Ohio remains an integral part of the State's economy, the greatest growth in Ohio's economy in recent years has been in the non-manufacturing sectors. Ohio's 2019 economic output, as measured by gross state product (GSP), totaled $698.5 billion, 3.30% of the national GDP and seventh largest among the states. The State ranks third within the manufacturing sector as a whole ($112.8 billion) and fourth in durable goods ($634.2 billion). As a percent of Ohio's 2019 GSP, 16.2% was attributable to manufacturing, with 22.2% attributable to the goods-producing sectors and 34.5% to the business services sectors, including finance, insurance and real estate. Ohio is the ninth largest exporting state with 2019 merchandise exports totaling $53.0 billion. The State's leading export products are machinery (including electrical machinery), motor vehicles (including parts), aircraft/spacecraft and plastics, which together accounted for 57.6% of that total.

Non-farm payroll employment in Ohio, in a diversifying employment base, decreased in 2001 through 2003, increased in 2004 through 2006, decreased in 2007 through 2010, and increased in 2011 through 2019. In the last three decades, there has been a shift toward the services industry, with manufacturing employment decreasing since its 1969 peak. The "non-manufacturing" sector employs approximately 87.4% of all non-farm payroll workers in Ohio. The changing mix of employment sectors nationally and in Ohio are shown in the following tables.

Ohio Nonfarm Payroll Jobs by Industry Type
Not Seasonally Adjusted (in 000)

	1980	1990*	2000*	2010*	2019*
Mining & Logging	31	18	13	11	13
Construction	167	192	246	169	218
Manufacturing	1,264	1,060	1,021	621	703
Trade, Transportation & Public Utilities	1,180	963	1,115	945	1,025
Financial Activities	204	255	305	277	309
Services	831[1]	n.a.	n.a.	n.a.	n.a.
Professional & Business Services	n.a.	455	647	629	736
Educational & Health Services	n.a.	539	679	839	949
Leisure & Hospitality	n.a.	400	483	475	579
Information & Other Services	n.a.	279	331	284	284
Government	690	722	785	786	780
TOTAL	4,367	4,882	5,624	5,036	5,596

* Reflects change in the bases for industry classification from the 1987 Standard Industrial Classification (SIC) system to the current 2017 North American Industry Classification System (NAICS). Data since 1990 reflects this change.

[1] Data under SIC system included professional and business, education and health, leisure and hospitality, information and 'other' services under a single "Services" industry category.

Totals may not foot due to rounding.

Source: U.S. Department of Labor, Bureau of Labor Statistics, National and State Current Employment Statistics.

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Distribution of Nonfarm Payroll Jobs by Industry Type (%)

	1980		1990*		2000*		2010*		2019*	
	Ohio	U.S	Ohio	U.S.	Ohio	U.S.	Ohio	U.S.	Ohio	U.S.
Mining & Logging	**0.7**	1.1	**0.4**	0.7	**0.2**	0.5	**0.2**	0.5	**0.2**	0.5
Construction	**3.8**	4.8	**3.9**	4.8	**4.4**	5.1	**3.4**	4.2	**3.9**	5.0
Manufacturing	**28.9**	22.4	**21.7**	16.2	**18.2**	13.1	**12.3**	8.8	**12.6**	8.5
Trade, Transportation & Public Utilities	**27.0**	28.2	**19.7**	20.7	**19.8**	19.9	**18.8**	18.9	**18.3**	18.4
Financial Activities	**4.7**	5.7	**5.2**	6.0	**5.4**	5.9	**5.5**	5.9	**5.5**	5.8
Services	**19.0**[1]	19.8[1]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Professional & Business Services	n.a.	n.a.	**9.3**	9.9	**11.5**	12.6	**12.5**	12.8	**13.2**	14.1
Educational & Health Services	n.a.	n.a.	**11.0**	10.1	**12.1**	11.6	**16.7**	15.3	**17.0**	16.0
Leisure & Hospitality	n.a.	n.a.	**8.2**	8.5	**8.6**	9.0	**9.4**	10.0	**10.3**	11.0
Information & Other Services	n.a.	n.a.	**5.7**	6.3	**5.9**	6.7	**5.6**	6.2	**5.1**	5.8
Government	**15.8**	18.0	**14.8**	16.8	**14.0**	15.7	**15.6**	17.3	**13.9**	15.0

* Reflects change in the bases for industry classification from the 1987 Standard Industrial Classification (SIC) system to the current 2017 North American Industry Classification System (NAICS). Data since 1990 has been adjusted to reflect this change.

[1] Data under SIC system included professional and business, education and health, leisure and hospitality, information and 'other' services under a single "Services" industry category.

Totals may not foot due to rounding.

Source: U.S. Department of Labor, Bureau of Labor Statistics, National and State Current Employment Statistics. The distribution percentages are as calculated by OBM.

Ohio and U.S. unemployment rates have been as follows:

Average Monthly Unemployment Rates (Seasonally Adjusted)

Year	Ohio	U.S.
1980	8.4%	7.1%
1990	5.6	5.6
2000	4.0	4.0
2005	5.9	5.1
2006	5.4	4.6
2007	5.6	4.6
2008	6.4	5.8
2009	10.3	9.3
2010	10.3	9.6
2011	8.8	8.9
2012	7.4	8.1
2013	7.5	7.4
2014	5.8	6.2
2015	4.9	5.3
2016	5.0	4.9
2017	5.0	4.4
2018	4.6	3.9
2019	4.2	3.7
2020 January	4.1	3.6
February	4.1	3.5
March	5.5	4.4
April	16.8	14.7

Source: Ohio Labor Market Information.

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The following are the private sector employers that had the highest number of full-time equivalent employees (estimated and rounded) in Ohio in 2019:

OHIO'S TOP 25 PRIVATE SECTOR EMPLOYERS – 2019

Company	Employment Headcount (Estimated)	Sector
Cleveland Clinic Health System	50,825	Health Care
Wal-Mart Stores Inc	49,330	Retail: General Merchandise
Kroger Company	45,340	Retail Food Stores
Mercy Health	31,500	Health Care
University Hospitals Health System	28,000	Health Care
Ohio Health	26,600	Health Care
ProMedica Health System	22,500	Health Care
JPMorgan Chase & Co.	21,000	Finance: Bank
Giant Eagle Inc.	19,000	Retail: Food Stores
Cincinnati Children's Hospital Medical System	15,660	Health Care
Honda Motor Company	15,000	Motor Vehicles
Golden Gate Capital LP / Bob Evans Restaurants	14,500	Hospitality: Restaurants
United Parcel Service	14,425	Transportation: Air Delivery
Nationwide Mutual Insurance Company	14,000	Finance: Insurance
Premier Health Partners	14,000	Health Care
Lowe's Companies Inc	13,400	Retail: Home Improvement
TriHealth Inc.	12,500	Health Care
Home Depot Inc.	12,350	Retail: Home Improvement
General Electric Company	12,000	Manufacture: Aerospace/Electrical
Kettering Health Network	12,000	Health Care
Nationwide Children's Hospital	12,000	Health Care
Berkshire Hathaway	11,800	Retail General Merchandiser
Amazon Inc.	11,500	Retail: General Merchandise
Procter & Gamble Company	11,500	Soaps and Consumer Goods
Progressive Corporation	11,000	Finance, Insurance

* Boldface indicates headquartered in Ohio. Source: Development Services Agency, Office of Research, May 2019.

POPULATION

Ohio's 2010 decennial census population of 11,536,504 indicated a 1.6% population growth over 2000 and ranked Ohio seventh among the states in population. The following tables show selected census figures:

Ohio Population — Total and by Age Group

Year	Total	Rank Among States	Decennial Growth Rate	0-19 Years	20-64 Years	65 and Over
1970	10,652,017	6	9.7%	4,124,400	5,539,600	993,500
1980	10,797,630	6	1.4	3,502,900	6,125,200	1,169,500
1990	10,847,115	7	0.5	3,141,000	6,299,100	1,407,000
2000	11,353,140	7	4.7	3,216,000	6,629,400	1,507,800
2010	11,536,504	7	1.6	3,067,126	6,847,363	1,622,015

* July 2019 Census population estimate is 11,689,100.

Source: U.S. Census Bureau Web Site, Population Estimates.

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Population of Ohio Metropolitan Areas(a)

	1970	1980	1990	2000	2010
Cleveland	2,063,729	1,898,825	2,202,069(b)	2,250,871(b)	2,077,240(b)
Cincinnati	1,106,821	1,100,983	1,526,092(c)	1,646,395(c)	2,130,151(d)
Columbus	1,017,847	1,093,316	1,345,450(e)	1,540,157(e)	1,836,536(e)
Dayton	852,531	830,070	951,270(f)	950,558(f)	979,835(f)
Akron	679,239	660,328	657,575	694,960	703,200
Toledo	643,443	656,940	614,128	618,203	651,429
Youngstown-Warren	537,124	531,350	600,895(g)	594,746(g)	565,773(g)
Canton	393,789	404,421	394,106	406,934	404,422
Lorain-Elyria	256,843	274,909	(b)	(b)	(b)
Hamilton-Middletown	226,207	258,787	291,479	332,807	(d)
Lima	210,074	218,244	154,340	155,084	106,331
Mansfield	129,997	131,205	174,007(g)	175,818(g)	124,475
Steubenville	96,193	91,564	142,523(h)	132,008(h)	124,454(h)

(a) SMSAs in 1970 & 1980, MSAs in 1990 and 2000 (PMSA's for Cleveland, Cincinnati, Akron, and Hamilton-Middletown).
(b) Lorain-Elyria included with Cleveland.
(c) Includes 12 counties (two in Indiana and six in Kentucky).
(d) Includes 15 counties (three in Indiana and seven in Kentucky); includes Hamilton-Middletown.
(e) Newark added.
(f) Springfield added.
(g) Includes three counties.
(h) Weirton added; includes two counties in West Virginia.
Source: U.S. Census Bureau Web Site, Metropolitan Area Population Estimates.

AGRICULTURAL AND RESOURCES BASES

With 13.9 million acres (of a total land area of 26.4 million acres) in farmland and an estimated 77,800 individual farms, agriculture combined with related agricultural sectors is an important segment of Ohio's economy. Ohio's 2017 crop production value of $5.3 billion ranked thirteenth among states and represented 2.6% of the U.S. total value. Ohio's 2017 livestock production value of $3.4 billion ranked nineteenth among states and represented 1.9% of the U.S. total value. Ohio accounts for 3.8% of total U.S. cash receipts for corn and 6.0% for soybeans. In 2017, Ohio's agricultural sector output (consisting of crops, livestock, poultry and dairy, and services and forestry, and all farm-related income) totaled $9.9 billion and represented 2.4% of the U.S. total value. Ohio purchased inputs (feed, seed, chemicals, fertilizer, livestock, utilities, labor, and machinery) totaled $5.8 billion. The net farm income on Ohio farms in 2017 was $1.2 billion.

The availability of natural resources, such as water and energy, is of vital nationwide concern. Ohio has large quantities of these important natural resources. With Lake Erie and the Ohio River on the State's borders, and many lakes and streams throughout the State, water is readily available for all uses. Additionally, Ohio has sizable coal resources ranking seventh among the states in coal reserves and fifteenth in coal production in 2017.

STATE EMPLOYEES AND COLLECTIVE BARGAINING AGREEMENTS

Since 1985, the number of regular State employees (excluding employees who are not paid by State warrant such as state university employees) has ranged from a low of 51,629 at the end of Fiscal Year 2019 to a high of 68,573 in 1994. The State engages in collective bargaining with five employee unions representing 14 bargaining units, and generally operates under three-year agreements. The State's current collective bargaining agreements expire between February 28, 2021 and June 30, 2021.

RETIREMENT SYSTEMS

The State has established five public retirement systems to provide retirement, disability retirement and survivor benefits, and other post-employment benefits such as retiree health care. None of these benefits are guaranteed under the Ohio Constitution or under State law, or subject to bargaining under the State's current public employee collective bargaining law.

The Public Employees Retirement System (PERS), the largest of the five, covers both State and local public employees and non-teaching employees at public higher education institutions. The State Teachers Retirement System (STRS) covers teaching employees at school districts and public higher education institutions. The School Employees Retirement System (SERS) covers non-teaching employees at school districts and community colleges. The Highway Patrol Retirement System (HPRS) covers State troopers, and the Ohio Police and Fire Pension Fund (OP&F) covers local safety forces. Full financial information for each retirement system can be found on its website in that system's Comprehensive Annual Financial Report (CAFR).

The five retirement systems began reporting pensions in accordance with GASB Statement No. 67, Financial Reporting for Pension Plans, in Fiscal Year 2014, and the State began reporting pensions in accordance with GASB Statement No. 68, Accounting and Financial Reporting for Pensions, in Fiscal Year 2015. The retirement systems also began reporting in accordance with GASB Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans, in Fiscal Year 2017, and the State began reporting in accordance with GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions, in Fiscal Year 2018.

The retirement systems were created by and operate pursuant to State law. As reflected in the 2012 pension reform acts discussed below, the General Assembly has the power to amend the structure and benefit levels, impose or revise contribution rates or amounts, and to make other changes. The systems have never been subject to the funding and vesting requirements of the federal Employee Retirement Income Security Act (ERISA). Federal law requires employees hired on or after April 1, 1986 to participate in the Medicare program, with matching employer and employee contributions, each now 1.45% of the wage base. Otherwise, State employees covered by a State retirement system are not currently covered under the federal Social Security Act. Congress has from time to time considered legislation relating to public sector retirement funds and to other aspects of public employee retirement.

Funding for the retirement systems is provided by a combination of public employer and employee contributions based on percentages of each employee's compensation, with the employees' contributions being deducted from their paychecks. Employee contribution percentages are either established in State law or by the retirement system board subject to a maximum contribution amount established in State law. With the exception of employee contributions for PERS law enforcement and public safety personnel, the current contribution percentages for each system (set forth in the following table under **Pension Benefits**) reflect the maximums permitted under State law.

In 1968, the Ohio General Assembly created the Ohio Retirement Study Council (ORSC) to oversee the state's five public retirement systems and to advise and inform the legislature on all matters relating to the benefits, funding, investment, and administration of those systems. The ORSC consists of nine voting members: three members of the House appointed by the Speaker; three members of the Senate appointed by the President; and three members appointed by the Governor (one representing the State, one representing local governments, and the third representing public education institutions). The five executive directors of the retirement systems also serve as nonvoting members of the ORSC.

Under State law, each retirement system's board is required to establish a period of not more than thirty years to amortize its unfunded actuarial accrued pension liability (UAAL). If in any year the period required to amortize that UAAL exceeds thirty years, the board must prepare and submit to the ORSC and the applicable committees in the Ohio General Assembly, a plan to reduce that amortization period to not more than thirty years. Based on their most recent reporting years reflected in the table below under **Pension Benefits**, all of the retirement systems meet the 30-year funding requirement, with the number of years to fully amortize UAAL at seventeen years for STRS, twenty-three years for HPRS, twenty-five years for SERS, twenty-seven years for PERS, and twenty-nine years for OP&F. Prior to the 2012 pension reform acts described below, the board of each of the five retirement systems had approved and submitted to the ORSC and the Ohio General Assembly a plan to reduce or maintain its amortization period at not more than thirty years. Pursuant to this continuing requirement, the OP&F board increased (effective January 1, 2014) contributions to its pension fund by reducing from 2.85% to 0.5% the amount of employer contributions directed to health care and redirecting the 2.35% difference to pensions, and the STRS board increased (effective July 1, 2014) contributions to its pension fund by redirecting to pensions the 1.0% of employer contributions previously directed to healthcare. The HPRS board also increased (effective January 1, 2018) contributions to its pension fund by reducing from 4.0% to 3.5% the amount of employer contributions directed to its health care fund.

After extensive review, the General Assembly in September 2012 enacted, and the Governor signed into law effective January 7, 2013, five pension reform acts to implement with modifications plans previously submitted by the five retirement systems to reduce or maintain their UAAL periods to or at not more than thirty years. The reform act for PERS made changes including, among others, increasing the years of service and eligibility age necessary to retire with full benefits, increasing from three to five the number of years used in determining "final average salary" for purposes of calculating retirement benefits, reducing the post-retirement cost of living adjustment, and increasing the minimum salary threshold required to earn full-time service credit for public employee eligibility to participate in the system. The other reform acts made similar changes to STRS, SERS, OP&F and HPRS, and enacted phased increases in the employee contribution rate for STRS (from 10% to a maximum of 14% in July 2016) and OP&F (from 10% to a maximum of 12.25% in July 2015). The HPRS board was authorized to increase employee contributions up to a maximum of 14% from 10% beginning in July 2013, and it has implemented this authorization by increasing the employee contribution rate to 11.5% for 2014, 12.5% for 2015 to 2017, and 14.0% for 2018 and thereafter. With the exception of PERS, the reform acts also authorize each retirement system's board to adjust certain pension benefits levels within limits without General Assembly approval. Under this authority, the post-retirement cost of living adjustment for retirees was eliminated by the STRS board (from 2.0% to 0.0% beginning July 1, 2017) and reduced by the HPRS board (phased down from 3.0% to 1.25% beginning January 1, 2015). As reflected above, these reform acts did not change the requirement that each system establish a period of not more than thirty years to amortize its pension UAAL and prepare and submit to the ORSC and the Ohio General Assembly a plan to reduce that amortization period if it exceeds thirty years.

Retirement Contributions

The State makes its employer contributions based on a percent of salary for each State employee that is an active member of a state retirement system. Currently, just over 95% of State employees are members of PERS, about 3.2% are in HPRS and about 1.2% are in STRS. The following table summarizes State employer and employee contributions to those retirement systems with State employee members ($ in millions):

State	**PERS**		**STRS**		**HPRS**		**Total**
Fiscal	Employer/Employee		Employer/Employee		Employer/Employee		Employer/Employee
Year	Amount	Pct. of Salary(a)	Amount	Pct. of Salary	Amount	Pct. of Salary	Contributions
2015	$383.7/$266.8	14.0%/10.0%	$5.8/$4.9	14.0%/12.0%	$26.7/$12.0	26.5%/12.5%	$416.2/$283.7
2016	395.9/278.4	14.0/10.0	5.7/4.8	14.0/13.0	27.2/12.8	26.5/12.5	428.9/296.0
2017	411.5/289.5	14.0/10.0	5.9/5.4	14.0/14.0	31.1/14.6	26.5/12.5	448.5/309.5
2018	421.5/296.7	14.0/10.0	5.9/5.5	14.0/14.0	30.1/14.6	26.5/12.5	458.3/316.8
2019	433.0/304.6	14.0/10.0	6.0/5.6	14.0/14.0	31.7/14.9	26.5/14.0	470.6/325.1

(a) Reflects PERS state and local contribution rates only. PERS law enforcement employer/employee contribution rate was 18.1%/12.1% in Fiscal Year 2012, increasing in increment to 18.1%/13.0% in Fiscal Year 2014, and public safety was 18.1%/11.5% in Fiscal Year 2012, increasing to 18.1%/12.0% in Fiscal Year 2013.

Source: Contributions based on percent of payroll expenses from State of Ohio accounting system records.

The State also has funded and continues to fund a subsidy to the OP&F system to pay for survivor benefits provided in law and not otherwise funded. The aggregate subsidies were $40.8 million in the 2016-17 biennium, $46.1 million in the 2018-19 biennium, and are appropriated at $69.7 million in the 2020-21 biennium. All State employer contributions are subject to appropriation in each State budget and are included in the appropriations for each department or agency's personnel costs.

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Pension Benefits

The following table summarizes State and local membership and financial data for each of the retirement systems for the most recent year reported by the particular system ($ in millions):

	PERS	STRS	SERS(a)	OP&F(b)	HPRS
Valuation as of:	12/31/18	07/01/19	06/30/19	01/01/19	12/31/18
Active Members	292,547	170,004	159,363	28,904	1,668
Retirees and Beneficiaries	219,075	157,418	81,024	29,566	1,671
Employer/Employee Contributions (% of Salary) (c)	14.0/10.0(d)	14.0/14.0	14.0/10.0	(e)	26.5/14.0
Active Member Payroll	$14,391.1	$12,296.8	$3,462.5	$2,218.0	$116.0
Market Value of Assets (MVA) (f)	$81,427.4	$75,726.5	$14,544.1	$13,941.1	$791.7
Actuarial Value of Assets (AVA) (g)	$84,287.0	$74,411.8	$14,293.0	$14,753.2	$769.1
Actuarial Accrued Liability (AAL) (h)	$108,705.0	$97,840.9	$20,129.8	$21,264.7	$1,158.2
Funding Ratio (AVA to AAL %, (MVA to AAL %))	77.5 (74.9)	76.1 (77.4)	71.0 (72.2)	69.4 (65.6)	66.4 (68.4)
Unfunded Actuarial Accrued Liability (UAAL)	$24,418.0	$23,429.1	5,836.8	$6,511.5	$389.1
UAAL to Active Member Payroll %	169.7	190.5	168.6	293.6	335.4
UAAL Funding Period (years) (i)	27	17	25	29	23

(a) SERS information excludes Medicare Part B reimbursement which is considered a post-employment healthcare benefit reported in accordance with GASB Statement 43 for all data except MVA.
(b) OP&F deferred retirement option plan balances are included in MVA, AVA, and AAL.
(c) For PERS and SERS, the maximum employer and employee contribution rates under law are 14.0% and 10.0%. For STRS and HPRS, the maximum employer and employee contributions rates are 14.0/14.0% and 26.5/14.0%, respectively. Each system's board annually determines the portion of the employer contribution, if any, that is directed to fund post-employment health care benefits.
(d) PERS state employer/employee contribution rate is 14.0/10.0%, local is 14.0/10.0%, law enforcement is 18.1/13.0%, and public safety is 18.1/12.0%. PERS state and local employer and employee contribution rates increased to their current statutory maximum of 14.0% and 10.0%, respectively, in calendar year 2008.
(e) OP&F employer and employee contribution rates increased to their current statutory maximum of 19.5/12.25% for police and 24.0/12.25% for fire in July 2015.
(f) Defined contribution plan assets are generally excluded for PERS and included for STRS.
(g) Recognizes assumed investment returns fully each year (7.2% for PERS and HPRS, 7.45% for STRS, 7.5% for SERS, and 8.0% for OP&F). Differences between actual and assumed investment returns, subject to each system's market corridor limitation, are phased-in over a closed four-year period.
(h) Reflects an individual entry age normal actuarial cost method.
(i) UAAL funding period is calculated based on a closed period as a level percent of payroll, except for the portion of PERS members who participate in the member directed plan which uses a closed period as a level dollar of payroll.

Sources: Retirement systems' CAFRs and annual actuarial valuations.

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The following table summarizes financial and funding information for each of the retirement systems for the five years previous to the current year information provided above as reported by the particular system ($ in millions):

Retirement System Valuation Year-End	Actuarial Value of Assets (AVA)(a)	Actuarial Accrued Liability (AAL)(b)	Unfunded Actuarial Accrued Liability (UAAL)(c)	Funding Ratio (AVA to AAL)	Market Value of Assets (MVA)(d)	Funding Ratio (MVA to AAL)	Active Member Payroll	UAAL Percent of Active Member Payroll
PERS								
12/31/18	$84,287.0	$108,705.0	$24,418.0	77.5%	$81,427.4	74.9%	$14,391.1	169.7%
12/31/17*	$83,292.2	$106,090.0	$22,797.8	78.5%	$87,104.9	82.1%	$14,058.0	162.2%
12/31/16	$80,279.7	$100,167.1	$19,887.4	80.1%	$77,514.2	77.4%	$13,717.6	145.0%
12/31/15	$78,061.0	$97,177.0	$19,116.0	80.3%	$74,560.1	76.7%	$13,177.0	145.1%
12/31/14	$74,865.0	$89,285.0	$14,420.0	83.8%	$77,263.2	86.5%	$12,932.5	111.5%
STRS								
07/01/19	$74,411.8	$97,840.9	$23,429.1	76.1%	$75,726.5	77.4%	$12,296.8	190.5%
07/01/18	$73,115.4	$96,904.1	$23,788.7	75.5%	$74,916.3	77.3%	$11,923.7	199.5%
07/01/17	$72,216.2	$96,126.4	$23,910.2	75.1%	$72,371.2	75.3%	$11,557.1	206.9%
07/01/16	$70,114.6	$100,756.4	$30,641.8	69.6%	$67,283.4	66.8%	$11,099.6	276.1%
07/01/15	$68,656.0	$99,014.7	$30,358.7	69.3%	$71,377.6	72.1%	$10,948.6	277.3%
SERS(e)								
06/30/19	$14,293.0	$20,129.8	$5,836.8	71.0%	$14,544.1	72.2%	$3,462.5	168.6%
06/30/18	$13,848.0	$19,598.1	$5,750.6	70.7%	$14,270.5	72.8%	$3,332.4	172.6%
06/30/17	$13,560.0	$19,186.6	$5,626.6	70.7%	$13,613.6	71.0%	$3,302.8	170.4%
06/30/16	$13,037.0	$19,368.6	$6,331.6	67.3%	$12,451.6	64.3%	$2,932.2	215.9%
06/30/15	$12,467.0	$18,122.0	$5,655.0	68.8%	$12,797.2	70.6%	$2,845.4	198.7%
OP&F(f)								
01/01/19	$14,753.2	$21,264.7	$6,511.5	69.4%	$13,941.1	65.6%	$2,218.0	293.6%
01/01/18	$14,594.6	$20,887.2	$6,292.7	69.9%	$14,963.6	71.6%	$2,209.3	284.8%
01/01/17	$14,162.5	$20,290.4	$6,127.9	69.8%	$13,682.4	67.4%	$2,180.9	281.0%
01/01/16	$13,653.0	$19,135.9	$5,482.9	71.3%	$12,923.9	67.5%	$2,060.9	266.1%
01/01/15	$13,029.3	$18,395.6	$5,366.3	70.8%	$13,453.4	73.1%	$1,986.6	270.1%
HPRS								
12/31/18	$769.1	$1,158.2	$389.1	66.4%	$715.5	66.4%	$116.0	335.4%
12/31/17	$774.7	$1,153.6	$378.9	67.2%	$786.4	68.2%	$112.7	336.2%
12/31/16	$763.7	$1,127.9	$364.3	67.7%	$721.7	64.0%	$108.8	334.8%
12/31/15	$739.8	$1,079.0	$339.1	68.6%	$704.2	65.3%	$100.0	339.2%
12/31/14	$712.3	$1,012.8	$300.5	70.3%	$740.7	73.1%	$99.2	302.9%

(a) Recognizes the assumed long-term investment return fully for each particular year. Differences between actual and assumed investment returns, subject to each system's market corridor limitation, are phased-in over a closed four-year period.

(b) Reflects an individual entry age actuarial cost method.

(c) UAAL is calculated based on a closed period as a level percent of payroll, except for STRS in 2013-2014 and OP&F in 2013-2014 for which UAAL is calculated based on an open period of time and the portion of PERS members who participate in the member directed plan which uses a level dollar of payroll.

(d) Defined contribution plan assets are excluded for PERS, except for annuitized define contribution assets, and included for STRS.

(e) Excludes Medicare Part B reimbursement which is considered a post-employment health care benefit reported in accordance with GASB 43 for all data except MVA.

(f) Effective with the January 1, 2015 valuation, OP&F deferred retirement option plan balances are included in AVA, AAL, and MVA.

*Reflects revised actuarial assumptions based on change in discount rate from 7.5% to 7.2%.

Sources: Retirement systems' CAFRs and annual actuarial valuations.

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GASB Statements No. 67 & 68. GASB Statement No. 67 replaced prior accounting standards for reporting pension plan information beginning in Fiscal Year 2014. Under this new accounting standard, the reporting of unfunded actuarial accrued liability (UAAL) has been replaced by the net pension liability (NPL). The NPL represents the excess of the total pension liability over fiduciary net position. The components of the NPL and the sensitivity of the NPL to changes in the single discount rate for each of the retirement systems for the most recent year are as follows ($ in millions):

	PERS(a)	**STRS**	**SERS**	**OP&F**	**HPRS**
Valuation as of:	**12/31/18**	**07/01/19**	**06/30/19**	**12/31/18**	**12/31/18**
Total Pension Liability (b)(c)	$108,701.2	$97,840.9	$20,527.3	$22,103.7(e)	$1,472.3(f)
Fiduciary Net Position (d)	$81,427.2	$75,726.5	$14,544.1	$13,941.1	$715.5
Net Pension Liability (NPL)	$27,274.0	$22,114.4	$5,983.2	$8,162.6	$756.9
Fiduciary Net Position as a Percentage of Total Pension Liability	74.9%	77.4%	70.9%	63.1%	48.6%
NPL Calculated With 1% Decrease in Discount Rate	$40,422.4	$32,317.7	$8,384.6	$10,729.2	$951.7
NPL Calculated With 1% Increase in Discount Rate	$16,354.7	$13,476.8	$3,969.3	$6,017.9	$608.0

(a) For PERS, figures reflect the traditional plan, the defined benefit portion of the combined plan, and the defined benefit annuities portion of the member-directed plan.

(b) Reflects a single discount rate of 7.2% for PERS, 7.45% for STRS, 7.5% for SERS, and 8.00% for OP&F. The projection of cash flows used to determine the discount rate assumed that employee and employer contributions are made at the actuarially determined rates under State law. Based on those assumptions, the fiduciary net position was projected to be available to make all projected future benefit payments. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of project benefit payments to determine total pension liability. Also reflects an individual entry age actuarial cost method.

(c) For HPRS, the fiduciary net position was not projected to be sufficient to make all projected future benefit payments and, therefore, a blended discount rate of 5.84% was used. The blended discount rate represents the long-term expected rate of return for the funded benefit payments and a tax-exempt, high-quality municipal bond rate for the unfunded benefit payment.

(d) Based on the market value of assets.

(e) Total pension liability was determined by an actuarial valuation as of 01/01/18, and updated with roll-forward procedures to 12/31/18.

(f) Total pension liability was determined by an actuarial valuation as of 12/31/17, and updated with roll-forward procedures to 12/31/18.

Sources: Retirement systems' CAFRs and annual actuarial valuations.

GASB Statement No. 68 replaced prior accounting standards for state and local governments reporting of pension plan information beginning in Fiscal Year 2015. This new accounting standard requires employers and non-employer contributing entities to report a proportionate share of their NPL in their financial statements. Employers determine their proportionate share of NPL by comparing their current year contributions to the plan to current year contributions to the plan made by all employers and non-employer entities, based on information provided to them by their retirement system(s). The State's proportionate share of the NPL and the sensitivity of the NPL to changes in the single discount rate for PERS, STRS and HPRS for the most recent year are as follows ($ in millions):

	PERS(a)	**STRS**	**HPRS**
Valuation as of:	**12/31/18**	**07/01/19**	**12/31/18**
Total Pension Liability (b)	$108,701.2	$97,840.9	$1,472.3(d)
Fiduciary Net Position (c)	$81,427.2	$75,726.5	$715.5
Net Pension Liability (NPL)	$27,274.0	$22,114.4	$756.9
State Proportionate Share of Net Pension Liability (PSL)	$5,692.5	$81.3	$756.9
PSL as a Percentage of NPL	**20.9%**	**0.3%**	**100.0%**
PSL Calculated With 1% Decrease in Discount Rate	$8,434.6	$118.7	$951.7
PSL Calculated With 1% Increase in Discount Rate	$3,415.4	$49.6	$608.0

(a) For PERS, figures reflect the traditional plan, the defined benefit portion of the combined plan, and the defined benefit annuities portion of the member-directed plan.

(b) Reflects a single discount rate of 7.2% for PERS, 7.45% for STRS, and 5.34% for HPRS.

(c) Based on the market value of assets.

(d) Total pension liability was determined by an actuarial valuation as of 12/31/17, and updated with roll-forward procedures to 12/31/18.

Sources: State of Ohio Fiscal Year 2018 CAFR, retirement systems' CAFRs and annual actuarial valuations.

Other Post-Employment Benefits

Each of the State's public retirement systems also offers post-employment health care benefits to its members. Contributions to and benefits under these health care programs are not vested and, as reflected by the recent actions of the OP&F and STRS boards described above, are subject to future adjustment by their respective boards. In this regard, PERS adopted, beginning in 2004, a series of health care preservation plans to adjust benefits and contributions by employers, employees, and retirees. In 2017 STRS implemented benefit adjustments that when coupled with strong investment returns and positive claims experience had a positive effect on its health care program. In 2019 OP&F replaced its health care plan with a new stipend-based health care model that also had a positive effect on its health care program. On January 15, 2020, the PERS board of trustees voted to curtail its discretionary retirement healthcare benefits for Medicare and pre-Medicare retirees and to reduce the monthly subsidy payments effective January 1, 2022. PERS eliminated the pension's healthcare group plan and replaced it with a stipend that will help supplement the cost of a new healthcare plan in the marketplace for some members. Base subsidy amounts were reduced from $1,380 to $1,200 monthly for pre-Medicare retirees and from $450 to $350 per month for Medicare-age retirees. Actual subsidies received by individual are determined based upon the age and years of service of a retiree.

The following table presents a summary of assets and actuarial accrued liabilities for post-employment healthcare benefits for each of the State's public retirement systems ($ in millions):

	PERS*	**STRS**	**SERS**	**OP&F(a)**	**HPRS**
Valuation as of:	**12/31/17****	**06/30/19**	**06/30/19**	**12/31/18**	**12/31/18**
Value of Assets (b)	$12,021.0	$3,872.2	$463.8	n/a	$109.5
Actuarial Accrued Liability (AAL) (c)	$18,393.0	$2,215.9	$2,198.7	n/a	$262.0
Unfunded Actuarial Accrued Liability (UAAL) (d)	$6,372.0	($1,656.2)	$1,734.9	n/a	$152.5
Funding Ratio (Assets to AAL %)	65.4%	174.7%	21.1%	n/a	41.8%
Employer Contribution (% of Salary) (e)	1.0%	0.0%	0.5%(f)	0.5%	0.0%

(a) OP&F is no longer reporting unfunded actuarial accrued liabilities under prior accounting standards. See GASB Statement No. 74 table below for information on the reporting of post-employment benefit plans other than pension plans.

(b) For PERS and HPRS, investment returns are recognized fully each year with the differences between actual and assumed investment returns (assumed at 6.0% for PERS and 7.25% for HPRS), subject to each system's market corridor limitation, phased-in over a closed four-year period. For STRS and SERS, reflects market value. For PERS, includes assets for member-directed plan participants.

(c) Reflects an individual entry age normal actuarial cost method.

(d) UAAL is calculated based on an open period as a level percent of payroll.

(e) Each system's board annually determines the portion of the employer contribution, if any, that is directed to fund post-employment health care benefits. See discussion above for recent adjustments by OP&F, STRS and HPRS boards to employer contribution directed to fund health care benefits.

(f) SERS also collects a health care surcharge from employers for employees who earn less than an actuarially determined minimum compensation amount. This amount is in addition to the amount allocated to health care from the employer contributions.

*Most recent PERS annual actuarial valuations for health care is as of 12/31/17.

**Reflects revised actuarial assumptions based on change in discount rate from 6.5% to 6.0%.

Sources: Retirement systems' CAFRs and annual actuarial valuations.

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The following table presents a summary of assets and actuarial accrued liabilities for post-employment healthcare benefits for the four years previous to the current year information provided above for each of the State's public retirement systems ($ in millions). For Fiscal Years 2016 and prior, financial reporting of health care plans is in compliance with GASB Statement 43 -- Financial Reporting for Post-Employment Benefit Plans Other than Pension Plans.

Retirement System Valuation Year-End	Value of Assets(a)	Actuarial Accrued Liability (AAL)(b)	Unfunded Actuarial Accrued Liability(c)	Funding Ratio (Assets to AAL)	Employer Contribution (% of Salary)(d)(e)
PERS					
12/31/17	$12,021.0	$18,393.0	$6,372.0	65.4%	1.0%
12/31/16	$12,098.2	$19,924.4	$7,826.2	60.7%	2.0%
12/31/15*	$11,933.1	$19,224.0	$7,291.0	62.1%	2.0%
12/31/14	$11,933.1	$18,514.6	$6,581.5	64.5%	2.0%
STRS(f)					
06/30/19	$3,872.2	$2,215.9	($1,656.2)	174.7%	0.0%
06/30/18	$3,721.3	$2,114.5	($1,606.8)	176.0%	0.0%
01/01/18	$3,691.4	$2,416.0	($1,275.4)	152.8%	0.0%
01/01/17	$3,222.1	$5,886.2	$2,664.1	54.7%	0.0%
01/01/16	$3,258.2	$5,154.2	$1,896.0	63.2%	0.0%
SERS					
06/30/19	$463.8	$2,198.7	$1,734.9	21.1%	0.0%
06/30/18	$435.6	$2,524.9	$2,089.3	17.3%	0.5%
06/30/17	$382.1	$2,396.5	$2,014.4	15.9%	0.0%
06/30/16	$370.2	$2,407.3	$2,037.1	15.4%	0.0%
OP&F					
01/01/17	$901.7	$5,487.8	$4,586.2	16.4%	0.50%
01/01/16	$929.4	$5,166.6	$4,237.2	18.0%	0.50%
01/01/15	$1,031.9	$5,399.6	$4,367.6	19.1%	0.50%
01/01/14	$1,053.5	$5,244.6	$4,191.0	20.1%	0.50%
HPRS					
12/31/18	$109.5	$262.0	$152.5	41.8%	3.50%
12/31/17	$110.1	$248.1	$138.0	44.4%	3.50%
12/31/16	$108.3	$403.7	$295.4	26.8%	4.00%
12/31/15	$106.6	$412.4	$305.8	25.8%	4.00%

(a) For PERS & HPRS, recognizes investment returns fully each year (assumed at 5%) with the differences between actual and assumed investment returns, subject to each system's market corridor limitation, phased-in over a closed four-year period. For STRS, SERS and OP&F, reflects market value.

(b) Reflects an individual entry age normal actuarial cost method.

(c) UAAL is calculated based on an open period as a level percent of payroll.

(d) Each system's board annually determines the portion of the employer contribution, if any, that is directed to fund post-employment health care benefits.

(e) SERS also collects a health care surcharge from employers for employees who earn less than an actuarially determined minimum compensation amount. This amount is in addition to the amount allocated to health care from the employer contributions.

(f) STRS actuarial valuations, previously as of January 1, are now calculated as of June 30.

*Reflects revised actuarial assumptions based on completion of a five-year experience study.

Sources: Retirement systems' annual actuarial valuations.

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GASB Statements No. 74 & 75. GASB Statement No. 74 replaced prior accounting standards for reporting post-employment benefit plans other than pension plans (OPEB) beginning in Fiscal Year 2017. Under this new accounting standard, the reporting of unfunded actuarial accrued liability has been replaced by the net OPEB liability (NOL). The NOL represents the excess of the total OPEB liability over fiduciary net position. The components of the NOL and the sensitivity of the NOL to changes in the single discount rate for those retirement systems that have reported information for the most recent year are as follows ($ in millions):

	PERS	**STRS**	**SERS**	**OP&F**	**HPRS**
Valuation as of:	**12/31/18**	**06/30/19**	**06/30/19**	**12/31/18**	**12/31/18**
Total OPEB Liability (a)(b)	$24,290.6(d)	$2,215.9	$2,978.6	$1,704.4(e)	$459.6(d)
Fiduciary Net Position (c)	$11,252.9	$3,872.2	$463.8	$793.8	$101.8
Net OPEB Liability (NOL)	$13,037.7	($1,656.2)	$2,514.8	$910.7	$357.8
Fiduciary Net Position as a Percentage of Total OPEB Liability	46.3%	174.7%	15.6%	46.6%	22.2%
NOL Calculated With 1% Decrease in Discount Rate	$16,680.1	($1,413.3)	$3,052.5	$1,109.4	$445.6
NOL Calculated With 1% Increase in Discount Rate	$10,141.6	($1,860.5)	$2,087.3	$743.8	$289.1
NOL Calculated With 1% Decrease in Cost Trend Rate	$12,531.6	($1,878.1)	$2,014.9	n/a	291.8
NOL Calculated With 1% Increase in Cost Trend Rate	$13,619.8	($1,384.5)	$3,178.1	n/a	434.9

(a) For PERS, SERS and HPRS, the fiduciary net position was not projected to be sufficient to make all projected future benefit payments and, therefore, blended discount rates of 3.96%, 3.70% and 3.82%, respectively, were used. The blended discount rates represent the long-term expected rate of return for the funded benefit payments and a tax-exempt, high-quality municipal bond rate for the unfunded benefit payment. For STRS, the fiduciary net position was projected to be sufficient to make all projected future benefit payments and, therefore, a discount rate of 7.45%, representing the long-term expected rate of return on assets, was used. For OP&F, the fiduciary net position was projected to be available to make projected future benefit payments until 2031 and, therefore, a single discount rate of 4.66%, representing a tax-exempt, high quality municipal bond rate, was used. After 2031, benefit payments will be funded on a pay-as-you go basis.

(b) For all retirement systems, reflects an individual entry age normal actuarial cost method as a level percent of payroll.

(c) Based on the market value of assets.

(d) Total OPEB liability was determined by an actuarial valuation as of 12/31/17, and updated with roll-forward procedures to 12/31/18.

(e) Total OPEB liability was determined by an actuarial valuation as of 01/01/18, and updated with roll-forward procedures to 12/31/18.

Sources: Retirement systems' CAFRs.

GASB Statement No. 75 replaced prior accounting standards for state and local governments reporting of postemployment benefit plans other than pensions beginning in Fiscal Year 2018. This new accounting standard requires employers and non-employer contributing entities to report a proportionate share of their NOL in their financial statements. Employers determine their proportionate share of NOL by comparing their current year contributions to the plan to current year contributions to the plan made by all employers and non-employer entities, based on information provided to them by their retirement system(s). The State's proportionate share of the NOL and the sensitivity of the NOL to changes in the single discount rate for PERS, STRS and HPRS for the most recent year are as follows ($ in millions):

	PERS	**STRS**	**HPRS**
Valuation as of:	**12/31/18**	**06/30/19**	**12/31/18**
Total OPEB Liability (a)	$24,290.6(c)	$2,215.9(d)	$459.6(e)
Fiduciary Net Position (b)	$11,252.9	$3,872.2	$101.8
Net OPEB Liability (NOL)	$13,037.7	($1,656.2)	$357.8
State Proportionate Share of Net OPEB Liability (PSL)	$2,704.8	($5.9)	$357.8
PSL as a Percentage of NOL	**20.8%**	**0.4%**	**100.0%**
PSL Calculated With 1% Decrease in Discount Rate	$3,460.5	($5.0)	$445.6
PSL Calculated With 1% Increase in Discount Rate	$2,103.9	($6.7)	$289.1
PSL Calculated With 1% Decrease in Cost Trend Rate	$2,599.9	($6.6)	$291.8
PSL Calculated With 1% Increase in Cost Trend Rate	$2,825.6	($5.3)	$434.9

(a) The fiduciary net position was not projected to be available to make all projected future benefit payments and, therefore, blended discount rates of 3.85% for PERS, 4.13% for STRS, and 3.42% for HPRS were used. The blended discount rates represent the long-term expected rate of return for the funded benefit payments and a tax-exempt, high-quality municipal bond rate for the unfunded benefit payment.

(b) Based on the market value of assets.

(c) Total OPEB liability was determined by an actuarial valuation as of 1/1/18, and updated with roll-forward procedures to 12/31/18.

(d) Total OPEB liability was determined by an actuarial valuation as of 01/01/19, and updated with roll-forward procedures to 6/30/19.

(e) Total OPEB liability was determined by an actuarial valuation as of 01/01/18, and updated with roll-forward procedures to 12/31/18.

Sources: State of Ohio Fiscal Year 2018 CAFR and retirement systems' CAFRs.

TAX LEVELS AND TAX BASES

The variety of taxes and excises levied by the State is indicated in several tables in this Appendix. According to the Federation of Tax Administrators, citing the U.S. Census Bureau as its source, Ohio ranked 35th in state taxes per capita in 2017. Three major tax bases in the State, personal income (taxed by the State and municipalities and, with voter approval, by certain school districts), retail sales and use (taxed by the State and counties and transit authorities), and real and tangible personal property of public utilities (taxed by local governments and school districts), are described below. The State also levies a commercial activity tax on business activities as described below.

The State also imposes a tax on the use, distribution, or sale of motor vehicle fuel. This "gasoline" tax was raised by 10.5 cents per gallon effective July 1, 2019 to 38.5 cents per gallon (approximately one cent of this tax is specifically directed to local highway-related infrastructure projects).

Sales and Use Tax

The State sales and use tax rate was increased one-quarter percent from 5.5% to 5.75% beginning September 1, 2013 (see **FISCAL MATTERS** – **Recent and Current Finances – Recent Biennia – 2014-15**). Prior to this increase, the rate had been 5.5% since July 1, 2005. The sales and use tax is levied uniformly across counties on retail sales of tangible personal property that are not specifically exempt. Retail sales include the rental and storage of tangible personal property, the rental of hotel rooms, and certain specified services including, but not limited to, repair and installation services, data processing, computer, and electronic information services, telecommunication and certain personal care services.

Counties and transit authorities each are authorized to levy permissive sales and use taxes at rates of 0.25% to 1.5% in quarter-percent increments and beginning in Fiscal Year 2019 in one-tenth percent increments. The highest potential aggregate of State and permissive local sales taxes is 8.75% and the highest currently levied in any county is 8%. The State collects the combined state and local tax and returns the local share directly to the counties and transit authorities.

Personal Income Tax

Under recent legislation, State personal income tax rates, applying generally to federal adjusted gross income minus (or plus) adjustments and personal exemptions, were reduced by 8.5% in calendar year 2013, 1.5% in calendar year 2014, 6.3% in calendar year 2015 (see **FISCAL MATTERS – Recent and Current Finances – Recent Biennia - 2014-15** and **2016-17**) and 4.0% in tax year 2019 (see **FISCAL MATTERS – Recent and Current Finances – Current Biennium**). Recent legislation also established a deduction for pass-through entities and sole proprietorships annual business net income of 75% in tax years 2014 and 2015, and 100% in tax year 2016 and beyond, up to $250,000 per taxpayer (see **FISCAL MATTERS – Recent and Current Finances – Recent Biennia – 2014-15** and **2016-17)**. Previously, personal income tax rates were reduced by 21% across five installments (4.2% annually in each of the tax years 2005 through 2008, with the final 4.2% reduction delayed from tax year 2009 to tax year 2011).

The 2018 personal income tax rates (adjusted for inflation) ranged from $80.56 plus 1.98% on incomes more than $10,851 but less than $16,300, with increasing bracketed base rates and percentages up to a maximum on incomes over $217,400 of $8,333 plus 4.997% on the amount over $217,400.

The Constitution requires 50% of State income tax receipts to be returned to the political subdivisions or school districts in which those receipts originate. There is no present constitutional limit on income tax rates.

Municipalities and school districts, and joint economic development districts and zones, may also levy certain income taxes. Any municipal rate (applying generally to wages and salaries and business net income) over 1%, and any school district income tax (applying generally to the State income tax base for individuals and estates), requires voter approval. Most cities and villages levy a municipal income tax. The highest municipal rate in 2018 was 3%. A school district income tax is currently approved in 197 districts. Each joint economic development district or zone may also levy an income tax (which like municipal income taxes applies generally to wages and salaries and business net income) with the rate of that tax limited to the highest income tax rate of a municipal member of the district or zone). Effective July 1, 2005, there may also be proposed for voter approval municipal income taxes to be shared with school districts, but those taxes may not be levied on the income of nonresidents.

Since 1970 the ratio of Ohio to U.S. aggregate personal income has declined, with Ohio's ranking among the states moving from fifth in 1970 to seventh in 1990, and eighth since 2000. This movement, portrayed below, in significant measure reflects "catching up" by several other states and a trend in Ohio toward more service sector employment.

Personal Income ($ in Billions)

		U.S.	Ohio	Ohio Percent of U.S.	State Rank*
1970	Total	$855.1	$44.1	5.2%	5
	per capita	4,196	4,136	98.6	18
1980	Total	2,307.0	107.0	4.6	6
	per capita	10,153	9,909	97.6	25
1990	Total	4,890.5	202.8	4.1	7
	per capita	19,591	18,669	95.3	21
2000	Total	8,650.3	326.0	3.8	8
	per capita	30,657	28,684	93.6	26
2010	Total	12,542.0	423.1	3.4	8
	per capita	40,546	36,663	90.4	32
2015	Total	15,711.6	515.9	3.3	8
	per capita	44,406	48,985	90.7	29
2016	Total	16,115.6	525.1	3.3	8
	per capita	45,127	49,883	90.5	29
2017	Total	16,820.3	544.8	3.2	8
	per capita	46,710	51,731	90.3	29
2018**	Total	17,572.9	563.9	3.2	8
	per capita	53,712	48,242	89.8	29

Source: U.S. Department of Commerce, Bureau of Economic Analysis.
* Excludes District of Columbia.
** Preliminary data.

In addition to personal income, the retail sales base is an important indicator of sales and use tax receipts.

Retail Sales ($ in Billions)

Fiscal Year	Ohio Retail Sales	U.S. Retail Sales	Ohio Percent of U.S.
1980	$39.01	$979.25	4.0%
1990	66.95	1,914.04	3.5
2000	117.72	3,213.82	3.6
2010	133.44	4,170.78	3.2
2016	166.34	5,417.16	3.1
2017	170.40	5,620.10	3.0
2018	172.82	5,905.83	2.9

Source: Calculated by Global Insight based on data from the U.S. Department of Commerce, Bureau of the Census.

Commercial Activity Tax

The State implemented a new commercial activity tax (CAT) on taxable gross receipts in excess of $1,000,000 from doing business in Ohio phased-in over Fiscal Years 2006 through 2010 until levied at the current rate of 0.26%. Beginning calendar year 2014, the State established a variable minimum tax on the CAT for businesses with taxable gross receipts greater than $1 million (see **FISCAL MATTERS** – **Recent and Current Finances – Recent Biennia** – **2014-15**). The State phased-out over the same general period its corporate franchise tax in equal annual increments over the 2006 through 2010 tax years, except for application to financial institutions and certain affiliates of insurance companies and financial institutions which was replaced with a new financial institutions tax effective tax year 2014 (see **FISCAL MATTERS – Recent and Current Finances – Recent Biennia – 2012-13** and **2014-15)**. On December 7, 2012, the Ohio Supreme Court upheld the application of the CAT to gross receipts from the sales of motor fuels but ordered that the proceeds of the CAT derived from those gross receipts – estimated by OBM at approximately $100 million annually – could not in the future be applied to non-highway purposes. Under provisions enacted in the biennial appropriations Act for the 2014-15 biennium and other legislation, the State phased-out the CAT on the sale of motor vehicle fuel and replaced it with a "petroleum activity tax" (PAT), computed on the basis of the average price of a gallon of gasoline or diesel fuel. In accordance with the Ohio Supreme Court's ruling, PAT receipts are required to be used for highway purposes.

As described further below, the receipts from the CAT are directed in part to make compensating payments to school districts and other local taxing units in connection with the phase-out of the tangible personal property tax in 2006 through 2009. Beginning in Fiscal Year 2012, the State has accelerated the phase-out of compensating payments to school districts and local governments resulting in an increased share of the CAT being deposited into the GRF (see **Property Tax** below and **FISCAL MATTERS** – **Recent and Current Finances – Recent Biennia** – **2014-15**, **2016-17** and **2018-19)**.

Property Tax

The following table lists, for informational purposes only, the non-exempt real and tangible personal property tax base in the State and taxes levied on that base (on a calendar year basis). Only local taxing subdivisions, and not the State, currently tax the real and tangible personal property included in this table. Reported figures for 2018 show that these property taxes represent 3.30% of Ohio personal income.

		Assessed Value (a)	Percent of True Value (b)	Taxes Charged
1980	Real(c)	$56,457,842,607	27.1%	$2,343,384,488(e)
	Tangible(d)	15,649,200,844	39.2	765,047,826
	Public Utility(c)	8,670,052,613	83.3	411,321,235
1990	Real	93,857,482,000	35.0	4,593,147,000(e)
	Tangible(d)	18,473,055,000	28.0	1,149,643,000
	Public Utility(c)(f)	12,934,191,000	88.6	799,396,000
2000	Real	167,857,657,350	35.0	8,697,809,112(e)
	Tangible(d)	23,298,302,564	25.0	1,720,740,378
	Public Utility(c)(f)	13,635,709,860	67.0	967,674,709
2010	Real	238,264,394,249	35.0	14,486,087,962(e)
	Tangible(d)	320,961,400	5.0(b)	18,432,832
	Public Utility(c)(f)	10,096,712,600(g)	52.9	747,237,219
2015	Real	234,225,079,130	35.0	15,676,144,409(e)
	Tangible(d)	-0-	-0-(b)	-0-
	Public Utility(c)(f)	14,111,055,940(g)	52.9	1,120,681,300
2016	Real	238,100,197,518	35.0	16,170,309,495(e)
	Tangible(d)	-0-	-0-(b)	-0-
	Public Utility(c)(f)	15,962,565,444(g)	56.8	1,271,855,503
2017	Real	247,070,913,220	35.0	16,591,449,814(e)
	Tangible(d)	-0-	-0-(b)	-0-
	Public Utility(c)(f)	16,700,657,510(g)(h)	58.7	1,347,897,157
2018	Real	255,789,561,245	35.0	17,060,795,040(e)
	Tangible(d)	-0-	-0-(b)	-0-
	Public Utility(c)(f)	19,220,171,390(g)(h)	60.67	1,533,994,082

(a) Increases in assessed value of "Real" are in part products of reappraisals.
(b) Regular annual reductions for "Tangible" (except for most public utility tangible) reached 0% in 2009; only telecommunication and telephone personal property was taxable in 2009 and 2010.
(c) Includes public utility personal property owned and located within Ohio and railroad real property; excludes public utility real property.
(d) Includes machinery, inventories, fixtures; effective tax year 2007 includes telephone company property. Excludes public utility tangible property. Effective tax year 2009 includes only telephone company property.
(e) Includes the statutory 10% rollback (12.5% for owner-occupied residences) and elderly/handicapped partial exemption amounts, paid by the State to local taxing entities to compensate for statutory reductions in local tax collections. Effective for tax year 2005 and thereafter, the 10% rollback was eliminated for real property used in business, with exceptions for certain property used in farming or for housing. The 12.5% rollback for owner-occupied residences was eliminated for new voter-approved tax levies (see **FISCAL MATTERS** – **Recent and Current Finances** – **Recent Biennia** – **2018-19**).
(f) Beginning in 1990, the true value of most public utility property is based on annual composite allowances that vary according to the type and age of property.
(g) Beginning in 2001, the statutory assessment rate for electric and gas utilities decreased from 88% to 25%.
(h) The statutory assessment rate for waterworks utilities is 88%, except for certain property first subject to taxation in 2017 is 25%.

Source: Ohio Department of Taxation.

Under State legislation effective July 1, 2005 and as reflected in the above table, the tangible personal property tax (TPPT) (including that tax on inventories) was phased out over tax years 2006 through 2009, with that tax generally eliminated beginning in tax year 2009. That legislation provided for the State to make replacement distributions to school districts and other local taxing units from revenue generated by the State commercial activity tax (CAT). Distributions were and are generally based on the taxable value of tangible personal property as reported in 2004 and property tax levies in effect for 2005. In Fiscal Year 2012, the State began phasing-out those TPPT replacement payments to schools and local governments with replacement payments to schools reduced by two percent of each district's total resources in each of Fiscal Years 2012 and 2013 for a total reduction of four percent; and replacement payments to local governments reduced by two percent of total resources for tax years 2011, 2012, and 2013 for a total reduction of six percent. Replacement payments were then frozen in Fiscal Years 2014 and 2015. The phasing out of these replacement payments resumed beginning in Fiscal Year 2016, with payments to school districts to be reduced in Fiscal Years 2016 and 2017 by between 1% and 2% of each district's total resources with the variance based on district wealth levels, with guarantees in both Fiscal Year 2016 and Fiscal Year 2017 that no district will fall below 100% and 96%, respectively, of its Fiscal Year 2015 total funding level. Fiscal Year 2016 and thereafter replacement payments to other local governments are reduced annually by two percent of their total resources (see **FISCAL MATTERS – Recent and Current Finances – Recent Biennia - 2016-17**).

Beginning July 2007, the State's homestead exemption program, which takes the form of a credit on local residential real property tax bills, was expanded to allow all senior citizens and disabled Ohioans, regardless of income, to exempt from tax the first $25,000 of the market value of their home. Previously eligibility was restricted and benefits were tiered based on income. Beginning July 1, 2013, eligibility for new applicants is based on income (see **FISCAL MATTERS – Recent and Current Finances - Recent Biennia** – **2014-15)**. The total cost of the homestead exemption program in Fiscal Year 2017 was $446.3 million, in Fiscal Year 2018 was $434.7 million, and in Fiscal Year 2019 was $418.8 million.

Property tax relief payments by the State to local subdivisions totaled $3.58 billion for the 2016-17 biennium, $3.60 billion for the 2018-19 biennium, and are appropriated at $3.70 billion for the 2020-21 biennium.

SCHOOLS AND MUNICIPALITIES

Schools

Litigation was commenced in the Ohio courts in 1991 questioning the constitutionality of Ohio's system of school funding and compliance with the constitutional requirement that the State provide a "thorough and efficient system of common schools". On December 11, 2002, the Ohio Supreme Court, in a 4-3 decision on a motion to reconsider its own decision rendered in September 2001, concluded (as it had in its 1997 and 2000 opinions in that litigation) that the State did not comply with that requirement, even after again noting and crediting significant State steps in preceding years.

In its prior decisions, the Ohio Supreme Court stated as general base threshold requirements that every school district have enough funds to operate, an appropriate number of teachers, sound and safe buildings, and equipment sufficient for all students to be afforded an educational opportunity. With particular respect to funding sources, the Court concluded in 1997 and 2000 decisions that property taxes no longer may be the primary means of school funding in Ohio.

On March 4, 2003, the plaintiffs filed with the original trial court a motion to schedule and conduct a conference to address compliance with the orders of the court in that case, the State petitioned the Ohio Supreme Court to issue a writ prohibiting that conference on compliance, and the trial court subsequently petitioned the Ohio Supreme Court for guidance as to the proper course to follow. On May 16, 2003, the Ohio Supreme Court granted that writ and ordered the dismissal of the motion before the trial court. On October 20, 2003, the United States Supreme Court declined to accept the plaintiffs' subsequent petition requesting further review of the case.

In the years following this litigation, the General Assembly has taken steps, including significantly increasing State funding for public schools, as discussed below. In addition, at the November 1999 election, electors approved a constitutional amendment authorizing the issuance of State general obligation debt for school buildings and for higher education facilities (see discussion under **STATE DEBT**). December 2000 legislation also addressed certain mandated programs and reserves, characterized by the plaintiffs and the Court as "unfunded mandates."

Under the financial structure in place before the 2009-10 biennium, Ohio's 613 public school districts and 49 joint vocational school districts received a major portion (but less than 50%) of their operating moneys from State subsidy appropriations (the primary portion of which is known as the Foundation Program) distributed in accordance with statutory formulae that take into account both local needs and local taxing capacity. The Foundation Program amounts have steadily increased in most recent years, including small aggregate increases even in those Fiscal Years in which appropriations cutbacks were imposed.

School districts also rely upon receipts from locally voted taxes. In part because of provisions of some State laws, such as partially limiting the increase (without further vote of the local electorate) in voted property tax collections that would otherwise result from increased assessed valuations, some school districts have experienced varying degrees of difficulty in meeting mandated and discretionary increased costs. Local electorates have largely determined the total moneys available for their schools. Locally elected boards of education and their school administrators are responsible for managing school programs and budgets within statutory requirements.

The State's school subsidy formulas that were used until the 2009-10 biennium were structured to encourage both program quality and local taxing effort. Until the late 1970's, although there were some temporary school closings, most local financial difficulties that arose were successfully resolved by the local districts themselves by some combination of voter approval of additional property tax levies, adjustments in program offerings, or other measures. For more than 20 years, requirements of law and levels of State funding have sufficed to prevent school closings for financial reasons, which in any case are prohibited by current law.

To broaden the potential local tax revenue base, school districts also may submit for voter approval income taxes on the district income of individuals and estates. Many districts have submitted the question, and income taxes are currently approved in 184 districts.

Biennial school funding State appropriations from the GRF (including property tax reimbursements) and Lottery Profits Education Fund (but excluding federal and special revenue funds) for recent biennia were:

- 2012-13 - $16.6 billion (a 2.3% decrease over the previous biennium).
- 2014-15 - $18.3 billion (a 10.5% increase over the previous biennium).
- 2016-17 - $20.0 billion (a 9.3% increase over the previous biennium).
- 2018-19 - $20.7 billion (a 3.5% increase over the previous biennium).

Those appropriations for school funding for the 2020-21 biennium are $21.8 billion (an 5.4% increase from the previous biennium), representing an increase of 3.7% in Fiscal Year 2020 over Fiscal Year 2019 and an increase of 1.9% in Fiscal Year 2021 over Fiscal Year 2020.

The amount of lottery profits transferred to the Lottery Profits Education Fund (LPEF) totaled $1.04 billion in Fiscal Year 2017, $1.17 billion in Fiscal Year 2018, $1.15 billion in Fiscal Year 2019, and is currently estimated to be $1.13 billion in Fiscal Year 2020. Ohio participation in the multi-state lottery commenced in May 2002. A constitutional provision requires that net lottery profits be paid into LPEF be used solely for the support of elementary, secondary, vocational and special education purposes, including application to debt service on general obligation bonds to finance common school facilities. The 2010-11 biennial appropriations Act also authorized the implementation of video lottery terminals (VLTs) at Ohio seven horse racing tracks.

The 2014-15 biennial appropriations Act enacted a new funding formula for the distribution of State funding to school districts based on a per pupil amount. This per pupil formula is similar to the "Building Blocks" school funding formula in place through Fiscal Year 2009 until its replacement with the "Evidence Based Model" for the 2010-11 biennium. The Evidence Based Model was repealed in July 2011 and a temporary formula was put in place for the 2012-13 biennium that allocated funding to each school district based on the per pupil funding it received for Fiscal Year 2011, adjusted by its share of a statewide per pupil adjustment amount that was indexed by the district's relative tax valuation per pupil.

The 2016-17 biennial appropriations Act modified certain components of the funding formula to distribute new resources to districts with less capacity to raise revenue through local sources. Under the modified formula, the State Department of Education will compute and pay to each school district education aid based on a per pupil funding amount of $5,900 in Fiscal Year 2016 and $6,000 in Fiscal Year 2017, multiplied by each school district's "state share index," which uses a three-year average of adjusted property valuation per pupil and the median income of that school district to calculate the percentage of the per-pupil amount that is to be paid by the State and the amount assumed to be contributed by the school district through local sources. The 2016-17 biennial appropriations Act also supplemented transportation funds for low density districts and continued to provide additional funds for students with exceptional needs, including those with special needs and the disabled, and limited English proficiency, and for economically disadvantaged and gifted students. Funding was also provided based on the number of K-3 students at each school district to be used to help school districts comply with Ohio's 3rd grade reading guarantee. The Act continued funding for the "Straight A Fund" to provide school districts with grants to develop and implement creative and innovative instructional models to inspire learning and student growth.

The 2018-19 biennial appropriations Act maintained all components of the 2016-17 funding formula with certain minor modifications. School district's education aid continued to be paid based on a per pupil funding amount (increasing to $6,010 in Fiscal Year 2018 and $6,020 in Fiscal Year 2019) multiplied by each school district's state share index. The 2018-19 appropriations Act reduced the minimum share of transportation funding to better target school districts with lower capacity to raise revenue locally and increased the multiplier in the formula for computing capacity aid to provide additional aid to low wealth school districts and those with small populations and low property valuation. The Act also modified the calculations for temporary transitional aid and the gain cap to take into account changes in student population. Funding also continued for other education initiatives including Early Childhood Education, EdChoice Expansion Scholarships, and the Community Connectors grant program.

The 2020-21 biennial appropriations Act provides each school district with the same amount of core funding and pupil transportation funding as it received under the funding formula for Fiscal Year 2019, along with certain other limited payments and adjustments, such as preschool special education payments and catastrophic cost reimbursements. The 2020-21 biennial appropriations Act also provides additional payments to school districts for student wellness and success to provide support for mental health counseling, wraparound supports, mentoring, and after-school programs. The Act also provides for additional payments to qualifying school districts that experienced an increase in enrollment between Fiscal Years 2016 and 2019.

Legislation was enacted in 1996 to address school districts in financial straits. It is similar to that for municipal "fiscal emergencies" and "fiscal watch" discussed below under **Municipalities**, but is particularly tailored to certain school districts and their then-existing or potential fiscal problems. Newer legislation created a third, more preliminary, category of "fiscal caution". A current listing of school districts in fiscal emergency or watch status can be found on the Auditor of State's website at http://www.auditor.state.oh.us.

Municipalities

Ohio has a mixture of urban and rural population, with approximately three-quarters urban. There are 932 incorporated cities and villages (municipalities with populations under 5,000) in the State. Five cities have populations of more than 100,000 and 16 cities exceed 50,000 in population.

A 1979 act established procedures for identifying and assisting those few cities and villages experiencing defined "fiscal emergencies." A commission composed of State and local officials, and private sector members experienced in business and finance appointed by the Governor, is to monitor the fiscal affairs of a municipality facing substantial financial problems. That act requires the municipality to develop, subject to approval and monitoring by its commission, a financial plan to eliminate deficits and cure any defaults and otherwise remedy fiscal emergency conditions and to take other actions required under its financial plan. It also provides enhanced protection for the municipality's bonds and notes and, subject to the act's stated standards and controls, permits the State to purchase limited amounts of the municipality's short-term obligations (used only once, in 1980).

As noted in the discussion above under **FISCAL MATTERS – Recent and Current Finances – Recent Biennia - 2012-13**, the amount of distributions to most local governments, including municipalities, from the several State local government revenue assistance funds have been subject to reductions and other adjustments in several of those recent biennia.

The fiscal emergency legislation has been amended to extend its potential application to counties (88 in the State) and townships. This extension is on an "if and as needed" basis and is not aimed at particularly identified existing fiscal problems of those subdivisions. A current listing of governments in each status can be found on the Auditor of State's website at http://www.auditor.state.oh.us.

APPENDIX B

BOOK-ENTRY SYSTEM; DTC

The information set forth in the following numbered paragraphs is based on information provided by The Depository Trust Company in its "Sample Offering Document Language Describing DTC and Book-Entry-Only Issuance" (labeled 06-2013). As such, the Treasurer believes it to be reliable, but the Treasurer takes no responsibility for the accuracy or completeness of that information. It has been adapted to the Series W Highway Bonds issue by substituting "Highway Bonds" for "Securities," "Treasurer" for "Issuer," "Bond Registrar" for "registrar" and by the addition of the italicized language set forth in the text. See also the additional information following those numbered paragraphs.

1. The Depository Trust Company ("DTC"), New York, NY, will act as securities depository for the Series W Highway Bonds. The Series W Highway Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered certificate will be issued for each maturity of the Series W Highway Bonds *(and interest rate within a maturity), each* in the aggregate principal amount of such maturity, and will be deposited with DTC.

2. DTC, the world's largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). DTC has an S&P rating of AA+. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com. *(This internet site is included for reference only, and the information in this internet site is not incorporated by reference in this Official Statement.)*

3. Purchases of Highway Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series W Highway Bonds on DTC's records. The ownership interest of each actual purchaser of each Highway Bond ("Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Series W Highway Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership

interests in the Series W Highway Bonds, except in the event that use of the book-entry system for the Series W Highway Bonds is discontinued.

4. To facilitate subsequent transfers, all Highway Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of Highway Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Series W Highway Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Highway Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

5. Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of Highway Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Series W Highway Bonds, such as redemptions, tenders, defaults and proposed amendments to the Highway Bond documents. For example, Beneficial Owners of Highway Bonds may wish to ascertain that the nominee holding the Series W Highway Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the Bond Registrar and request that copies of notices be provided directly to them.

6. Redemption notices shall be sent to DTC. If less than all of the Series W Highway Bonds within an issue are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

7. Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to Highway Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Treasurer as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the Series W Highway Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

8. Redemption proceeds, distributions and dividends *(and Bond Service Charge payments)* on the Series W Highway Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts, upon DTC's receipt of funds and corresponding detail information from the Treasurer or the Bond Registrar, on the payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Bond Registrar, or the Treasurer, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds, distributions and dividends *(and Bond Service Charge payments)* to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Treasurer or the Bond Registrar, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

9. (Not applicable to the Series W Highway Bonds.)

10. DTC may discontinue providing its services as depository with respect to the Series W Highway Bonds at any time by giving reasonable notice to the Treasurer or the Bond Registrar. Under such circumstances, in the event that a successor depository is not obtained, Highway Bonds are required to be printed *(or otherwise produced)* and delivered.

11. The Treasurer may decide to discontinue use of the system of book-entry-only transfers through DTC (or a successor securities depository). In that event, Highway Bonds will be printed *(or otherwise produced)* and delivered to DTC. (See also **THE SERIES W HIGHWAY BONDS — Revision of Book-Entry System; Replacement Highway Bonds.)**

12. The information above in this section concerning DTC and DTC's book-entry system has been obtained from sources that the Treasurer believes to be reliable, but the Treasurer takes no responsibility for the accuracy thereof.

Direct Participants and Indirect Participants may impose service charges on Beneficial Owners in certain cases. Purchasers of book-entry interests should discuss that possibility with their brokers.

The Treasurer and the Bond Registrar have no role in the purchases, transfers or sales of book-entry interests. The rights of Beneficial Owners to transfer or pledge their interests, and the manner of transferring or pledging those interests, may be subject to applicable state law. Beneficial Owners may want to discuss with their legal advisors the manner of transferring or pledging their book-entry interests.

The Treasurer and the Bond Registrar have no responsibility or liability for any aspects of the records or notices relating to, or payments made on account of, beneficial ownership, or for maintaining, supervising or reviewing any records relating to that ownership.

The Treasurer and the Bond Registrar cannot and do not give any assurances that DTC, Direct Participants, Indirect Participants or others will distribute to the Beneficial Owners payments of debt charges on the Series W Highway Bonds made to DTC as the registered owner, or redemption, if any, or other notices, or that they will do so on a timely basis, or that DTC, Direct Participants or Indirect Participants will serve or act in a manner described in this Official Statement.

For all purposes under the Highway Bond proceedings (except the Continuing Disclosure Commitment under which others as well as DTC may be considered an owner or holder of the Series W Highway Bonds, see **CONTINUING DISCLOSURE COMMITMENT),** DTC will be and will be considered by the Treasurer and the Bond Registrar to be the owner or holder of the Series W Highway Bonds.

Beneficial Owners will not receive or have the right to receive physical delivery of Highway Bonds, and, except to the extent they may have rights as Beneficial Owners or holders under the Continuing Disclosure Commitment, will not be or be considered by the Treasurer and the Bond Registrar to be, and will not have any rights as, owners or holders of Highway Bonds under the Highway Bond proceedings.

Reference herein to "DTC" includes when applicable any successor securities depository and the nominee of the depository.

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EXHIBIT A

PROPOSED TEXT OF LEGAL OPINION
FOR SERIES W HIGHWAY BONDS

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June 18, 2020

RBC Capital Markets, LLC
as representative of the several Underwriters named in the Bond Purchase Agreement, dated June 4, 2020 with the State of Ohio, acting by and through the State Treasurer of Ohio
New York, New York

Ladies and Gentlemen:

We have served as bond counsel in connection with the issuance by the State Treasurer of Ohio (the "Treasurer") of $68,045,000 General Obligation Highway Capital Improvements Bonds, Series W (the "Bonds") of the State of Ohio (the "State"). In such capacity, we have examined such law and such certified proceedings, certifications and other documents as we have deemed necessary to render this opinion.

The Bonds are issued under authority of and pursuant to Section 2m of Article VIII of the Ohio Constitution, Chapter 151 of the Ohio Revised Code, particularly Sections 151.01 and thereof, other authorizations by the Ohio General Assembly, and an order of the Treasurer given on June 4, 2020 (the "Order").

Regarding questions of fact material to our opinion, we have relied on the transcript of proceedings for the Bonds (the "Transcript") and other certifications of public officials and others as we have deemed necessary without undertaking to verify the same by independent investigation.

Based on this examination, we are of the opinion that, as of the date hereof, under existing federal and Ohio statutes, as now judicially construed, together with existing regulations, rulings and court decisions:

1. The Bonds are valid and legally binding general obligations of the State, and the full faith and credit, revenue and taxing power of the State (except for the "net state lottery proceeds" described in the next succeeding opinion paragraph) are pledged to the payment of the principal of and interest and any premium (collectively, the "Debt Service") on the Bonds.

2. The Debt Service, together with principal of and interest and any premium on bonds or other obligations heretofore issued pursuant to Section 2m of Article VIII of the Ohio Constitution and Chapter 151 of the Ohio Revised Code, as amended (collectively, the "Obligations"), are payable from and secured by the pledge of all excises, taxes and other sources of revenue of the State, except "net state lottery proceeds," as defined in Section 151.03 of the Ohio Revised Code, but including the fees, excises or license taxes relating to the registration, operation or use of vehicles on the public highways or to fuels used for propelling such vehicles, all referred to in Section 5a of Article XII of the Ohio Constitution (such excises, taxes and other sources of revenue of the State, excluding the stated exception, collectively, the "Pledged Excises and Taxes").

3. The State covenants in Section 151.01(M) of the Ohio Revised Code and in the Order that it and the applicable officers and agencies of the State, including the General Assembly of the State, will, so long as any Obligations are outstanding in accordance with their terms, maintain statutory authority for and cause to be levied, collected and applied sufficient Pledged Excises and Taxes so that the same will be sufficient in amounts to pay Debt Service on the Bonds when due.

Except as provided in Section 2 of Article XII of the Ohio Constitution with respect to ad valorem taxes on real and tangible personal property, the Ohio Constitution does not at present impose any limitation upon the amount or rate of Pledged Excises and Taxes which may be levied to pay Debt Service on the Bonds. Provision has been made by law for the appropriation and setting aside each year in the Highway Capital Improvement Bond Service Fund (as defined in Section 151.06 of the Ohio Revised Code) of a sufficient amount of the Pledged Excises and Taxes, without other or further appropriation, to pay when due Debt Service on the Bonds.

4. Under existing law, interest on the Bonds is excluded from gross income for federal income tax purposes under Section 103(a) of the Internal Revenue Code of 1986, as amended (the "Code"), and is not treated as an item of tax preference under Section 57 of the Code for purposes of the alternative minimum tax. Interest on, any transfer of, and any profit made on the sale, exchange or other disposition of the Bonds are exempt from the Ohio corporation franchise tax (to the extent computed on the net income basis), the Ohio personal income tax, and income taxes imposed by municipalities and other political subdivisions in Ohio. Interest on the Bonds, as is the case with most other forms of interest on debt obligations, is not subject to the Ohio commercial activity tax imposed under Chapter 5751 of the Ohio Revised Code.

The opinions stated above are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. In rendering all such opinions, we assume, without independent verification, and rely upon (i) the accuracy of the factual matters represented, warranted or certified in the proceedings and documents we have examined and (ii) the due and legal authorization, execution and delivery of those documents by, and the valid, binding and enforceable nature of those documents upon, any parties other than the State.

In rendering those opinions with respect to the treatment of the interest on the Bonds, we further assume and rely upon compliance with the covenants in the proceedings and documents we have examined, including those of the State. Failure to comply with certain of those covenants subsequent to issuance of the Bonds may cause interest on the Bonds to be included in gross income for federal income tax purposes retroactively to their date of issuance.

We express no opinion and make no representation as to any other tax consequence regarding the Bonds, except as set forth above.

Please be advised that the rights of the holders of the Bonds and the enforceability thereof are limited by bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting creditors' rights heretofore or hereafter enacted, general principles of equity (whether considered at law or in equity) governing specific performance, injunctive relief and other equitable remedies, and the exercise of judicial discretion in appropriate cases.

This opinion is given as of the date hereof, and we assume no obligation to revise or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention, or any changes in law that may hereafter occur. We bring to your attention the fact that our legal opinions are an expression of our professional judgment and are not a guarantee of a result.

Respectfully submitted,