DATA BULLETIN:

AN EXAMINATION OF THE OUTSTANDING DEBT AND DEBT SERVICE OF THE COMMONWEALTH

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To the People of Kentucky:

The Auditor of Public Accounts (APA) has examined public data regarding the debt of the Commonwealth as a matter of public interest to taxpayers. My motto has been to "Follow the Data," so to make the data more transparent, we intend to highlight information from time to time that is of public interest.

The purpose of this examination is to inform the public about the amount, the different types, and the interest related to the debts of the Commonwealth. The information provided is from agencies or officials other than the APA, unless indicated otherwise, and has not been audited by the APA.

This report is intended to generate further discussion and public interest in the programs examined. If you have information or concerns related to the subject of this examination or other uses of public funds, please contact our office at 1-800-KY-ALERT.

Sincerely,

Mike Harmon
Auditor of Public Accounts

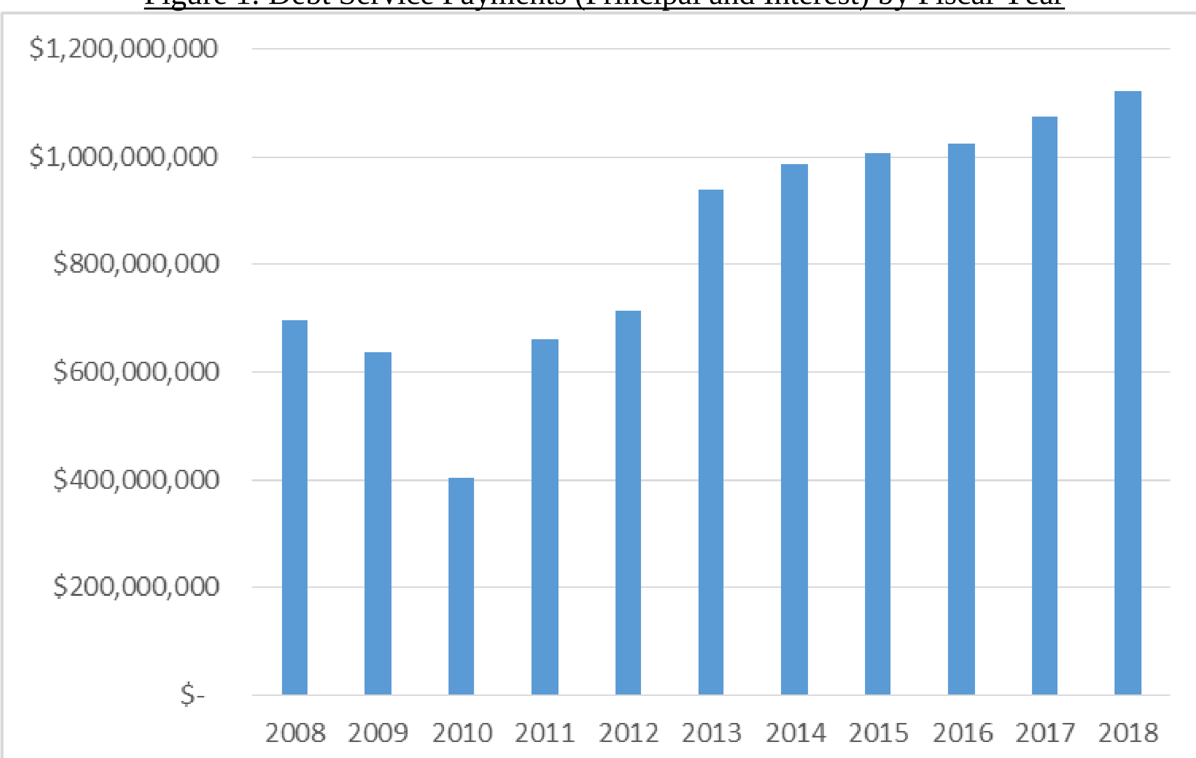
Forms of State Debt

For the purposes of this bulletin, "The Commonwealth" refers to the three branches of state government and its component units, including the state universities. It does not include local units of governments, such as counties, cities, school districts, or other governments with less than statewide jurisdiction. The Commonwealth enters into debt agreements when it spends or is obligated to spend more money than it has available in cash. Bonded debts of the Commonwealth are generally considered by the Internal Revenue Service to be tax-exempt municipal bonds. As such, purchasers of these bonds do not have to pay federal income tax on the associated interest income. Unless otherwise noted, all figures are accurate as of June 30, 2018, the end of the fiscal year.

As of June 30, 2018, the Commonwealth's debt, including unfunded liabilities, totaled an estimated $54,615,409,616. As depicted in Figure 1 below, the total of debt service payments, including both principal and interest in FY 2018 was $1,123,276,000 (over one billion dollars). This amount does not include employer contributions toward pension and post-retirement insurance plans.

In FY 2018, the Commonwealth paid $1,123,276,000 in principal and interest on outstanding bonded debt.

Figure 1: Debt Service Payments (Principal and Interest) by Fiscal Year



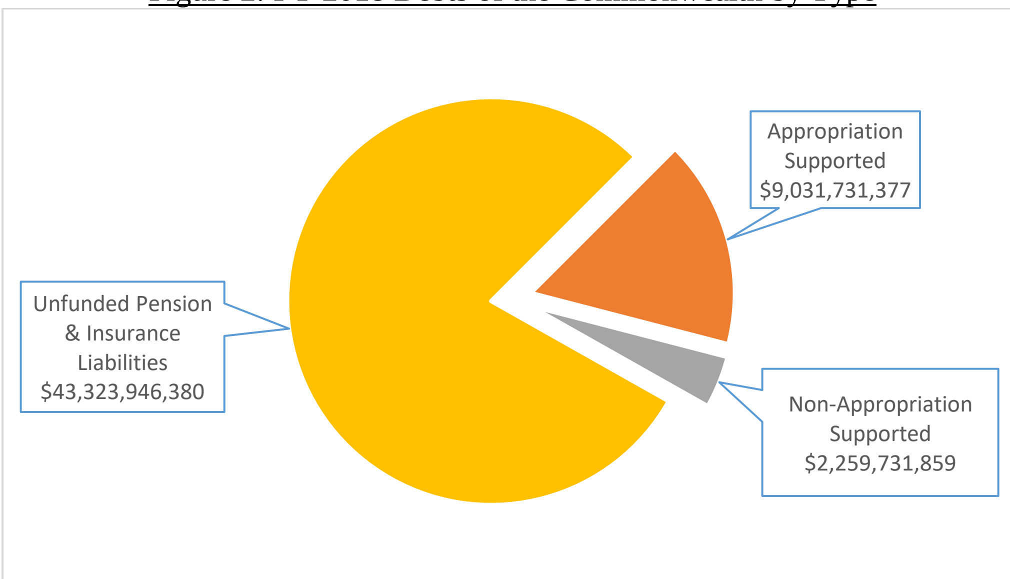
Source: APA based on 2018 CAFR Supplement.
These figures exclude any payments to Pension or OPEB Plans.

The Commonwealth's debt is spread across three broad categories, as depicted in Figure 2:

- Appropriation Supported ($9,031,731,377),
- Non-Appropriation Supported ($2,259,731,859), and
- Unfunded Pension and Other Post-Employment Benefit (OPEB) Liabilities ($43,323,946,380).

OPEB typically refers to health insurance premium payments made on behalf of retirees, but may include other retiree benefits depending on the plan details. These debts accumulate to $12,261.58 per resident of the Commonwealth (see Appendix A).

Figure 2: FY 2018 Debts of the Commonwealth by Type



Source: APA via FY 2018 CAFR and CAFR Supplement

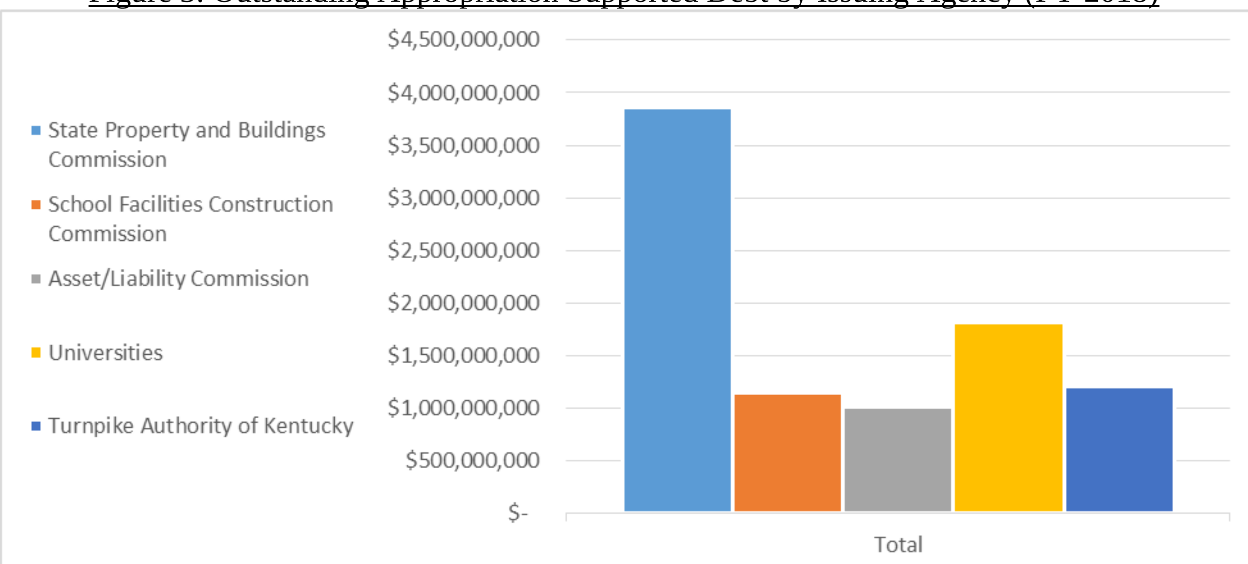
Appropriation Supported Bonds

Pursuant to sections 49-50 of Kentucky's Constitution, debts greater than $500,000 must be authorized by the General Assembly and then ratified by a majority of the voters at a general election. Appropriation Supported Bonds are an exception to these constitutional provisions. If the General Assembly also authorizes an annual tax that will be sufficient to discharge the debt within 30 years, no referendum is required. Appropriation Supported Bonds pledge a dedicated revenue stream to the repayment of a debt and specifically exclude a pledge of the full faith and credit of the Commonwealth. If the pledged revenue is insufficient, the Commonwealth is not legally obligated to raise additional taxes to cover the shortfall.

Historically, both in Kentucky and around the United States, Appropriation Supported Bonds are treated by investors as though they do have the backing of the full faith and credit of general governments. There is a long history of general governments stepping in and funding gaps in revenue in order to protect the bond ratings of the project and of the government as a whole. This creates a moral hazard that circumvents the intent of the Constitution for the people to determine whether to enter into a potential future obligation to raise taxes. The Commonwealth has never defaulted on any general or appropriation supported obligation.

As depicted in Figure 3 below, Appropriation Supported Bonds are currently issued by four major agencies and all eight state universities. The Asset/Liability Commission (ALCo) is charged with minimizing the impact of fluctuating interest rates on the Commonwealth and as of the end of FY 2018 had $1,008,140,000 in bonds outstanding to support this charge. The School Facilities Construction Commission (SFCC) was established to provide an equitable distribution of state funding for school construction and technology to the Commonwealth's 173 school districts and currently has $1,150,259,377 in bonds outstanding. The State Property and Buildings Commission (SPBC) currently has $3,857,460,000 in bonds outstanding to provide financing for capital construction projects and financing programs approved by the General Assembly. The Turnpike Authority of Kentucky (TAK) currently has $1,203,755,000 in bonds outstanding to construct, acquire, finance, and operate road systems for the benefit of the traveling public. Combined, the state universities have $1,812,117,000 in outstanding Appropriation Supported Debt.

Figure 3: Outstanding Appropriation Supported Debt by Issuing Agency (FY 2018)



Source: APA based on information in ALCo's semi-annual report and the Commonwealth's CAFR Supplement

Total Appropriation Supported Bonds as of 6/30/2018: $9,031,731,377

Non-Appropriation Supported Bonds

Another type of debt exempted from the requirements of sections 49-50 of the Constitution are bonds issued in the name of the Commonwealth, but for the convenience of a governmental entity other than the state. The proceeds of the bonds and the responsibility for repayment of the bonds are those of the other governmental entity. Issuances come with a non-binding pledge of state support in the event of a deficiency. However, if the entity fails to make the required debt service payments and the Commonwealth does not honor the pledge, there may be bond rating consequences for the Commonwealth. Debt service is paid from funds received from their respective customers for services such as mortgages or student loans.

Currently four entities have outstanding debt of this kind. The Kentucky Housing Corporation (KHC) has $485,275,000 outstanding to finance the construction or rehabilitation of low income multifamily housing. The Kentucky Higher Education Student Loan Corporation (KHESLC) has $816,151,490 outstanding to fund grants, scholarships, and student loans to Kentucky students. KHC and KHESLC issue their own debt independently. They do not need to have projects approved or debt service appropriated by the General Assembly, but each have a $5 billion limit to outstanding debt.

The Kentucky Public Transportation Infrastructure Authority (KPTIA) has $727,870,369 in bonds outstanding to fund the construction of the Ohio River Bridges Project. Debt service is paid from tolls collected on certain bridges crossing the Ohio River. KPTIA must have its projects approved by the General Assembly but does not require an appropriation for debt service. To date the only approved project through KPTIA is the Ohio River Bridges Project.

The Kentucky Infrastructure Authority (KIA) has $230,435,000 in bonds outstanding to finance drinking water and clean water infrastructure projects. KIA approves its own projects, but relies on the General Assembly to appropriate funds for debt service. It is also limited to $500 million of outstanding debt. For more information on limitations to agencies issuing debt, see Appendix B.

Total Non-Appropriation Supported Debt as of 6/30/18: $2,259,731,859

Unfunded Pension Liabilities (UPL)

As part of the compensation package for state and local government employees, governments make contributions to multiple pension plans and other post-employment benefit (OPEB) plans in Kentucky. OPEB primarily refers to retiree health insurance benefits, but may include any benefit provided to a retiree other than a pension payment. When the combination of employee contributions, employer contributions, and the expected return on investments are not projected to meet all the benefit payments to retirees as they become due, the pension or OPEB plan has an unfunded liability. An unfunded liability does not necessarily mean that current benefit payments cannot be made today, but without additional funding, an improvement in investment returns, or a structural change to the benefit scheme, at some point in the future, cash on hand will not be able to make all benefit payments.

Because of recent changes in government accounting standards (GASB 67, 68, and 75), governments across the country are recognizing significantly higher unfunded pension and OPEB liabilities which may not be comparable to figures reported in prior years.

Future benefit payments are estimated based on an actuary's report, which includes assumptions about life expectancy, wage growth, expected retirement ages, and workforce growth. These assumptions were changed in FY 2017 and resulted in recognizing higher unfunded liabilities. Because there are so many assumptions involved, it is impossible to determine the exact amount of the unfunded liability, and it should be treated as an estimate. Since the Commonwealth is contractually obligated to provide benefit payments to retirees and the retirees have already earned these payments throughout the course of their employment, the unfunded liability is a debt.

State and local government employees in Kentucky are members of eight separate pension plans overseen by three different funds. Each pension plan also has a matching OPEB plan.

- Kentucky Retirement Systems (KRS) is responsible for five plans:
  - Kentucky Employees Retirement System (Hazardous)
  - Kentucky Employees Retirement System (Non-hazardous)
  - County Employees Retirement System (Hazardous)
  - County Employees Retirement System (Non-hazardous)
  - State Police Retirement System
- Judicial Form Retirement System is responsible for two plans:
  - Kentucky Judicial Retirement Plan
  - Kentucky Legislators Retirement Plan
- Kentucky Teachers Retirement System is responsible for one plan with the same name as the fund.

Figure 4: Summary of Net Pension and OPEB Fund Liabilities/(Assets) at FYE 2018

Plan	**Pension Liability/(Asset)**	**OPEB Liability/(Asset)**
KERS Hazardous	$ 506,438,000	$ (125,591,720)
KERS Non-Hazardous	13,670,786,000	1,544,301,000
CERS Hazardous	2,444,211,000	403,046,000
CERS Non-Hazardous	6,172,542,000	678,497,000
SPRS	721,956,000	71,242,000
KTRS	13,726,922,000	3,497,913,000
Judicial	64,097,300	(31,926,700)
Legislators	1,603,600	(22,090,100)
Total	**$ 37,308,555,900**	**$ 6,015,390,480**

Source: APA based on information in each of the fund's annual reports for FY 2018

Total Unfunded Pension and OPEB Liability as of 6/30/2018: $43,323,946,380

Other Debt-Related Issues

General Obligation Bonds

The simplest form of government bond is a General Obligation (GO) bond. When the Commonwealth issues a GO bond, it pledges the full faith and credit of the Commonwealth as well as its taxing authority. If general revenues are insufficient to pay the principal and interest as they come due, the Commonwealth is legally obligated to raise taxes in order to make the payments. GO bonds fall under 49-50 of the Kentucky Constitution which requires a vote of the people on all issuances over $500,000. No GO bonds have been outstanding or authorized since 1966.

Tax and Revenue Anticipation Notes

The Kentucky Asset/Liability Commission (ALCo) was created in 1997 by the General Assembly. Because revenues are not collected uniformly throughout the year, ALCo is authorized to issue tax and revenue anticipation notes to fund expenditures in advance of anticipated revenues. No tax and revenue anticipation notes were issued or outstanding in 2018.

Instead, ALCo borrows from the state investment pool. All positive cash balances in various funds are held in the state investment pool. As General Fund bills are received in excess of the available cash balance, cash is borrowed from the pool. Monthly, interest is distributed to the various government funds providing funding through the pool via a journal entry. The General Fund cash balance remains negative for most of the year, but the total net cash balance across all government funds remains positive. According to the Executive Director of the Office of Financial Management, the typical net cash balance across all funds is around $3 billion.

Conduit Bonds

The Kentucky Economic Development Finance Authority (KEDFA) issues bonds to provide funding in support of private hospital and industry projects. The private entity enters into a lease agreement with the Commonwealth that obligates the private entity to pay the debt service on the bonds, so no net liability is accrued.

KEDFA issues debt using the following procedures. KEDFA's board must first authorize the bond and negotiate with a third party entity to provide the debt service to repay the bond. KEDFA's board is made up of six people appointed by the Kentucky Economic Development Partnership, and the Secretary of the Finance and Administration Cabinet. The Economic Development Partnership is made up of the Governor, the Secretary of the Finance and Administration Cabinet, the Secretary of the Public Protection Cabinet, and eight private sector appointees by the Governor. The State Property and Buildings Commission must then authorize the bond. The Capital Projects and Bond Oversight Committee then has an opportunity to review the issuance, but the review is non-binding and the Secretary of the Finance and Administration Cabinet may decide to proceed without approval from the Capital Projects and Bond Oversight Committee according to KRS 45.810(3)(c).

AOC Judicial Center Projects

The Administrative Office of the Courts provides lease payments to counties in an amount equal to the debt service payments on Judicial Centers that were constructed under the Project Development Board. The related debts are in the names of the various counties and are therefore not debts of the Commonwealth.

Authorized but Unissued

According to ALCo, the General Assembly has authorized $1,285,640,000 in bonds that remain unissued. Long-term projects may have been authorized to issue debt but are not ready to use the funds and defer issuing to avoid unnecessary interest costs. Figure 5 further describes the make-up of these unissued bonds. Since they are unissued, they represent potential for indebtedness instead of an actual debt.

Figure 5: Summary of Authorized but Unissued Debt by Fund as of June 30, 2018

Legislative Session (Year)	General Fund (millions)	Agency Fund (millions)	Road Fund (millions)	TOTAL (millions)
2010 and prior	40.88	17.50	50.00	108.38
2012	13.35	-	12.50	25.85
2014	163.54	9.01	-	172.55
2016	262.32	93.34	-	355.66
2017	10.50	-	-	10.50
2018	369.82	542.89	-	912.70
Bond Pool Proceeds	(300.00)	-	-	(300.00)
TOTAL	560.41	662.73	62.50	1,285.64

Source: Kentucky Asset/Liability Commission Semi-Annual Report, for the period ending June 30, 2018

Rating Agencies

The Commonwealth of Kentucky receives a rating from each of the three major bond rating firms: Standard and Poor's Global Ratings (S&P), Moody's Investors Service (Moody's), and Fitch Ratings (Fitch). Each rating agency has different labels for ratings, but they are analogous to each other. While it is difficult to determine the exact fiscal impact of a rating change, a higher rating indicates a lower perceived risk of default and generally results in lower interest rates on new issuances and therefore savings for the taxpayers. Issuing entities receive bond ratings and so do the individual issuances of bonds. The Commonwealth receives a General Obligation issuer rating, as well as Appropriation Supported issuer ratings for three major funds: General, Road, and Federal Highway Trust.

Figure 6: Government Bond Ratings by Rating Agencies

Class	Moody's	S&P Global	Fitch
Prime	Aaa	AAA	AAA
High investment grade	Aa1	AA+	AA+
	Aa2	AA	AA
	Aa3	AA-	AA-
Upper medium grade	A1	A+	A+
	A2	A	A
	A3	A-	A-
Lower medium grade	Baa1	BBB+	BBB+
	Baa2	BBB	BBB
	Baa3	BBB-	BBB-

Source: Pew Charitable Trusts

Figure 7: The Commonwealth's Issuer Ratings as of 6/30/18

	Moody's	S & P	Fitch
General Obligation Issuer Rating (GO Implied)	Aa3	A	AA-
General Fund Appropriation Rating (GF)	A1	A-	A+
Road Fund Appropriation Rating (RF)	Aa3	AA-	A+
Federal Highway Trust Fund Appropriation Rating	A2	AA	A+

Source: ALCo 6/30/18 Semi-Annual Report

Comparing Kentucky's Rating to Other States

Of the seven surrounding states, the Commonwealth has the second lowest General Obligation issuer rating, as of May 2017. Only Illinois, which also has significant unfunded pension liabilities, has a lower rating (Baa2/BBB/BBB+). Indiana, Missouri, Tennessee, and Virginia each have the highest possible rating (Aaa/AAA/AAA), while Ohio and West Virginia are generally a step above Kentucky with Aa1/AA+/AA+ and Aa1/AA-/AA respectively. This disparity means Kentucky's public debt is considered to be a somewhat riskier investment than the public debt of neighboring states.

Of the surrounding seven states, the Commonwealth has the second lowest general obligation issuer rating.

The General Assembly Authorizes Debt Issuances, but Exceptions Exist

Generally, debt issuances must be approved for specific projects and the debt service appropriated by the General Assembly. While a few agencies have been delegated the authority to authorize their own debt issuances, the Office of Financial Management (OFM) in the Finance and Administration Cabinet (FAC) is responsible for the issuance, management, review and approval of all debt issued by the Commonwealth and its agencies.

Uniquely, KEDFA has no limitations on debt issuances. Its projects do not need to be approved or have debt service appropriated by the General Assembly and there is no dollar limit to KEDFA's outstanding Conduit Bonds. These bonds are not generally a debt of the Commonwealth. KEDFA's board authorizes the issuance of bonds. The proceeds from the bonds are then lent to other entities at terms that require the entity to cover the debt service on the bonds.

KEDFA has no limitations on the amount of debt it can issue and needs no prior approval by the General Assembly.

Generally, these entities are privately held. However, in at least one instance – the Kentucky Wired Infrastructure Company (KWIC) – the entity was a non-profit corporation created by the Commonwealth, which is reliant on appropriations from the General Assembly to cover the debt service. This instance creates a situation where a Conduit Bond becomes, for practical purposes, an Appropriation Supported Bond that is a liability of the Commonwealth, without the prior authorization of the General Assembly. It is not known if other similar instances exist. For more information about KWIC, see the Special Examination Report released by the Auditor of Public Accounts which is available at www.auditor.ky.gov.

ALCo has a blanket exception for all borrowings to smooth cash flow during the year. SFCC and KIA approve their own projects, but debt service must be appropriated by the General Assembly. KIA also has a limit of $500 million outstanding.

As mentioned under Non-Appropriation Supported Bonds above, KHC and KHESLC do not have projects approved or debt service appropriated but each have a $5 billion limit to outstanding debt. KPTIA must have its projects approved but does not require an appropriation for debt service.

Appendix A: Summary of the Amounts and Types of Commonwealth Debt

Type of Debt	**Liability**
General Obligation Bonds	-
Appropriation Supported Debt	9,031,731,377
Non-Appropriation Supported Debt	2,259,731,859
Unfunded Pension & OPEB Liabilities	43,323,946,380
Total	$ 54,615,409,616
Estimated population	4,454,189
Per Capita Total Burden	$ 12,261.58
Per Capita Bonded Debt Burden	$ 2,535.02

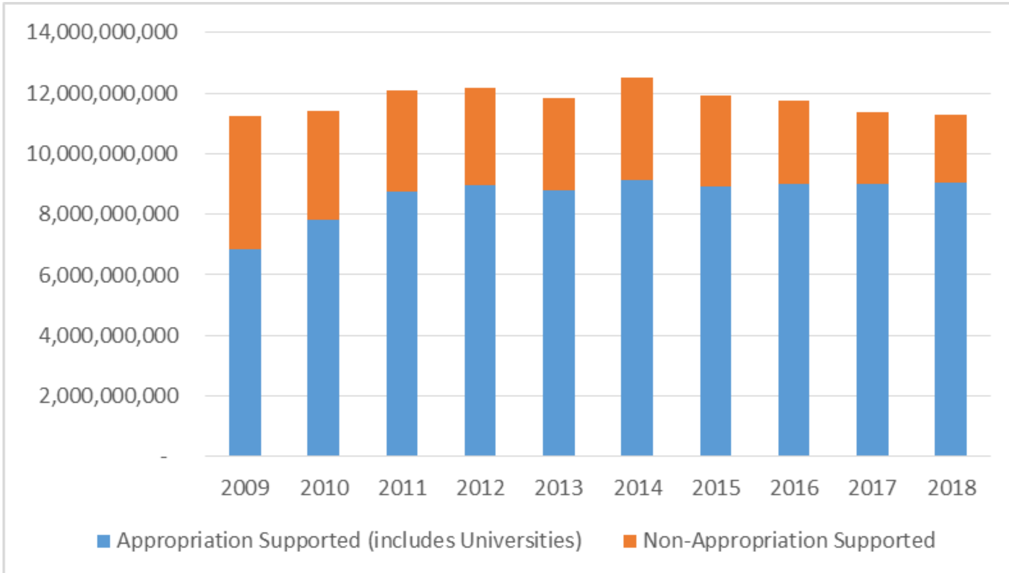
Source: 2018 CAFR Supplement and 2018 Retirement Plan Financial Statements. Population estimate comes from the 2016 American Community Survey.

Appendix B: Summary of Limitations on Agencies' Ability to Issue Debt

Entity	Statutory Authority & Purpose of Funding	Limitation	Rating
State Property and Buildings Commission	KRS 56.450 Capital construction projects and programs	Projects must be approved and debt service must be appropriated by the General Assembly.	A1 A- A+
Kentucky Asset/Liability Commission (ALCo)	KRS 56.860 Capital projects and cash flow borrowings	Projects must be approved and debt service must be appropriated by the General Assembly, except for cash flow borrowings.	Varies
Turnpike Authority of Kentucky	KRS 175.410-175.990 Construct, maintain, repair, and operate Turnpike projects, resource recovery roads and economic development roads.	Projects must be approved and debt service must be appropriated by the General Assembly.	Aa3 A- A+
State Universities	KRS 56.495 Construction of educational, housing, or dining facilities.	Projects must be approved and debt service must be appropriated by the General Assembly.	Varies
Kentucky Housing Corporation	KRS 198A Low interest mortgage and construction loans to increase the supply of low and moderate income housing.	Limited to $5 billion total outstanding.	Aaa AAA NR
Kentucky Infrastructure Authority	KRS 224A Local government infrastructure facilities and loans to industries for pollution control	Revolving funds' debt service must be appropriated by the General Assembly. Other programs are limited to $500 million outstanding, without legislative approval.	Aaa AAA AAA
Kentucky Higher Education Student Loan Corporation	KRS 164A Making student loans.	Limited to $5 billion outstanding.	Varies
School Facilities Construction Commission	KRS 157.611-157.665 Construction of school and vocational education facilities.	Debt service must be appropriated by the General Assembly.	A1 NR NR
Kentucky Economic Development Finance Authority	KRS 154 Issue Conduit Bonds	None	Varies
Kentucky Public Transportation Infrastructure Authority	KRS 175B.005-175B.115 Construction and operation of significant transportation projects.	Projects must be approved by the General Assembly.	Baa3 NR BBB-

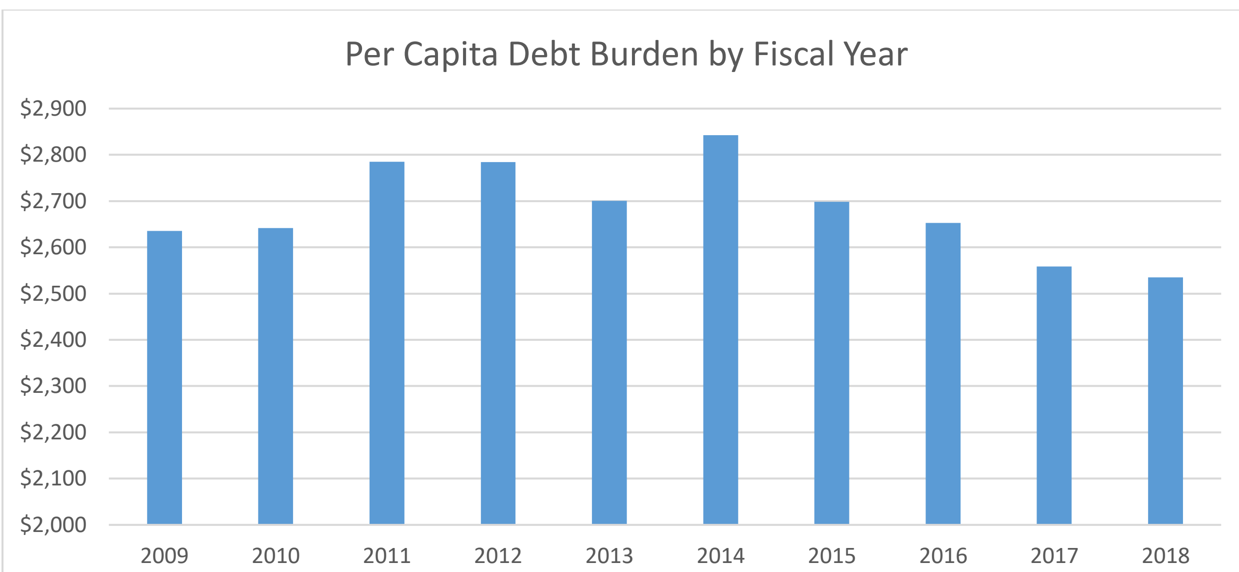
Source: APA, based on the CAFR Supplemental Information for FY 2018.

Appendix C: Bonded Indebtedness by Type (past 10 years)



Source: APA based on the 2009-2018 CAFR Supplements.
This figure excludes any unfunded liabilities.

Appendix D: Per Capita Bonded Debt Burden over the Past 10 Fiscal Years



Source: APA based on the 2009-2018 CAFR Supplements. This graph excludes Unfunded Pension and OPEB Liabilities, as data was not readily available prior to FY 2017.