Current and Forecasted Debt Payment Ratios (FY20- FY25)

Annual Report – June 2019

University of Colorado

Boulder | Colorado Springs | Denver | Anschutz Medical Campus

Purpose of this Annual Report

The purpose of this report on Current and Forecasted Debt Payment Ratios is to assist the Board of Regents in its evaluation of the University of Colorado's long-term borrowing obligations and its ability to consider campus proposals for additional capital projects. Excessive debt service as a percentage of operating expenses can serve to constrain future programming opportunities. However, debt issued for projects also grows strategic programs, increases the University's revenue and operating expense base, and provides additional prudent borrowing capacity in future years.

The University obtains credit ratings from Moody's Investor Services and Fitch on all new, publicly-offered debt. Moody's rates the university's long term bonds Aa1, and Fitch rates the University AA+. For the new commercial paper program, the Moody's rating is P1 and Fitch is F1+, both the highest rating levels for this type of program. Rating agency reports provide excellent financial overviews of the University from the perspective of lenders to the University. Copies of the most recent reports are included in Appendix A.

Under C.R.S. §23-20-129.5(2)(d) the University is required to maintain a debt service payment ratio of less than 10% of the University's annual unrestricted expenditures plus mandatory transfers. Historically, Regent policy has been more conservative than the statutory provision, limiting the annual debt service payment ratio to 7%. In applying this debt monitoring measure, it is important to recognize that annual debt service includes both interest payments and retirement of bond principal in the numerator of the ratio. Currently, approximately half of the university's annual debt service payment represents the retirement of bond principal.

An analysis of the debt service payment ratios for University as a whole, and for each campus, is summarized below. The analysis contemplates all currently outstanding long-term obligations of the University as of June 30, 2019 (Table 1). Commercial paper's assumed cost is 2% for the university during the construction phase of the financed projects. This analysis includes all approved projects or proposed for Regent approval in June of 2019 and initially financed through the issuance of external obligations for the period from FY20 through FY21 (Table 2).

Methodology

Each fiscal year's debt service payment ratio is calculated by dividing the maximum annual debt service (MADS) payment, by the sum of that fiscal year's forecasted combined unrestricted current fund expenditures plus mandatory transfers (UCFE&MT).

$$\boxed{\text{Maximum Annual Principal and Interest}} \div \boxed{\text{Unrestricted Current Fund Expenditures \& Mandatory Transfers}} = \boxed{\text{Debt Service Payment Ratio}}$$

As with any forecasting, there are assumptions used to derive the results. In comparing projections from previous reports to actual experience, projected debt service payment ratios have been overestimated primarily due to assumptions that proved to be conservative regarding future growth of unrestricted general fund expenditures (the denominator of the ratio).

Debt service payment ratios are not static indicators. The University has experienced compound annual growth rates of unrestricted current fund expenditures of approximately 6.7% annually over the last five fiscal years, the denominator of this ratio, permitting significant new borrowing for needed projects without significantly affecting the calculated ratios.

Assumptions

Forecasting the debt service payment ratios takes into account several variables over a five-year period. These variables include the current debt service payment structure of the University, an assumed future interest rate for new borrowing on approved projections, projected growth rates of current fund expenditures on each of the campuses as provided by the Office for Budget and Finance, and capital project costs and amounts financed, provided by the campuses and system office.

1. **Current Debt Structure and Projected Interest Rates.** The University's average cost of borrowing is approximately 3.15%. For bonds expected to be issued in FY 20-21 we are using an assumed borrowing rate of 4%, higher than our historical and current experience. In terms of sensitivity of the projected debt service ratio based on future interest rates, an increase to 5% cost of borrowing would impact annual principal and interest by $700,000 per year per $100 million borrowed, a relatively small impact compared to year-to-year changes in annual unrestricted current fund expenditures at the University.
2. **Future Years' Expenditure Base.** The base year, upon which unrestricted current fund expenditures plus mandatory transfers are calculated, are FY20 budgeted amounts. Historically, for FY15-FY19 the calculated annual increase in UCFE&MT's was 6.7%, in part because CU Medicine expenditures at the Anschutz campus grew by a compound rate of 11.6% during that period. The projection of UCFE&MT in this report is based on the actual average increases in the last 5 fiscal years.

3. **Future Borrowing.** Amounts financed for each project are as listed (Table 2), and are for projects that have been or are expected to be approved by the Regents by June of 2019.

Projected Debt Service Payment Ratios

University of Colorado System (Table 3):

As of June 30, 2019, the University has $1.48 billion in outstanding long term debt from directly issued revenue bonds, $7 million in other long-term obligations from contingent liabilities outstanding (Table 1) and currently $115 million of commercial paper outstanding. With no change to currently outstanding debt structure, maximum annual debt service payments for the University in FY22 (including contingent liabilities) will be $129.5 million decreasing to $122.2 million by FY25. The University's current debt payment ratio for "existing-only" debt is 3.6% as of FY20. If the University were to issue no new debt, the system-wide ratio would decrease to 2.4% by FY25.

If the University finances the additional projects on Table 2, the total debt payment ratio is forecasted to be

2.8% in FY25 and would still be able to accommodate an additional $225 million in annual debt service payments while remaining below 7% debt service payment capacity. Thus, total University debt could increase by approximately $3.5 billion in FY25, assuming 4% borrowing cost and a 25-year term and remain within the Board of Regents' 7% debt service payment ratio cap, assuming no additional growth in UCFE&MT after FY25.

University of Colorado Boulder (Table 4):

In FY20, maximum future debt service payments for CU-Boulder's outstanding long-term obligations is approximately $69.2 million and reflect a FY20 debt payment ratio of 6.0%. With no change to currently outstanding debt structure, total debt service payments for the campus will decrease to $65.9 million by FY25, and the debt payment ratio would decline to 3.9% by FY25 if no additional debt is issued.

If the campus finances the additional projects on Table 2, its debt payment ratio would fall from 6.0% in FY20 to 4.4% by FY25. That would leave the campus with an additional $62.8 million in capacity under the 7% debt payment ratio in FY25, approximately $425 million of borrowing capacity, assuming 4% interest cost on a 25 year, level debt service borrowing.

University of Colorado Colorado Springs (Table 5):

In FY20, maximum payments for UCCS's long-term obligations will be approximately $19.1 million. Colorado Springs' current debt service payment ratio in FY20 is 8.4%. If no additional debt is issued, the campus debt payment ratio would decline to 5.8% by FY25.

There are no anticipated additional borrowings at this time.

The largest recent project for UCCS, the $45 million Hybl Sports Medicine Project, is being developed in partnership with Centura Health, a prominent non-profit healthcare provider. Centura Health and City of Champions TIFF are expected to pay long-term lease or other contractual agreements 42% of the debt service on this project as a project partners. The debt payment ratio in Table 5 assumes 100% of the debt service cost is borne by the campus. Hence, the projected ratios overstate the likely campus impact of the debt service payment costs of the project.

University of Colorado Denver Campus (Table 6):*UC Denver*
For the CU Denver campus, the current debt ratio for FY20 is 2.9%, largely because of the Series 2018A Bonds, interim refinancing of previously issued CVA debt. If the campus issues no debt for additional projects other than the planned refinancing of the 2018A Bonds, that ratio would decline to 2.3% by FY25. The projected ratio for the campus including the interim refinancing and Projected financing of the planned First Year Student Housing project is 4.1% in FY25, falling from 5.2% in FY20. The campus could increase debt service payments in FY25 by approximately $9.7 million and stay within the 7% limitation, an approximate $151 million borrowing, at 4% on a 25-year level payment basis.

University of Colorado Anschutz Medical Campus (Table 7)

CU Anschutz Medical Campus
For the CU Anschutz Medical Campus, the current debt service payment ratio for FY20 is 1.9%. If the campus issues no additional debt, that ratio would decline to approximately 1.2% by FY25. If the campus issues debt for the projects listed on Table 2, the FY20 ratio would rise to approximately 2.4%, before declining to 1.4% in FY25. Currently, the Anschutz Medical Campus is not substantially limited by the 7% debt service payment ratio as a result of including CU Medicine in the campus computations.

Appendix A – Rating Reports

MOODY'S
INVESTORS SERVICE

Rating Action: Moody's assigns Aa1 to University of Colorado's (CO) Series 2018B; outlook stable

11 Sep 2018

New York, September 11, 2018 -- Moody's Investors Service has assigned a Aa1 rating to the University of Colorado's (CO) (CU) planned approximately $69 million University Enterprise Revenue Bonds, Series 2018B to be issued by The Regents of the University of Colorado. The bonds will be fixed rate with a final maturity in fiscal 2048. We maintain Aa1 ratings on outstanding university enterprise revenue bonds and P-1 ratings on commercial paper (CP) and extendable commercial paper (ECP) programs. Total outstanding parity debt is approximately $1.7 billion. The rating outlook is stable.

RATINGS RATIONALE

The Aa1 rating reflects CU's role as the State of Colorado's (Aa1 stable, issuer rating) flagship institution, with excellent strategic positioning, a significant research enterprise and important role in the provision of medical education for Colorado. The rating is underscored by CU's substantial $3.9 billion scope of operations, consistent favorable operating performance, and robust gift support. Prudent financial stewardship will ensure continued strong growth in cash and investments and manageable leverage. Offsetting challenges include very limited state support for operations and capital, ongoing need for capital investment, and exposure to potentially volatile healthcare operations. A large unfunded pension liability adds further uncertainty for future expense pressures.

RATING OUTLOOK

The stable outlook reflects our expectations that CU will continue to record steady student demand and growth in student charges, strong research activity and flexibility to adjust to federal funding challenges, and substantial gift support.

FACTORS THAT COULD LEAD TO AN UPGRADE

-Material growth in financial cushion to debt and operations, with sustained elevated improvement in cash flow margins

-Substantial increase in research profile

-Significant enhancement in philanthropic support FACTORS THAT

COULD LEAD TO A DOWNGRADE

-Sustained weakening of financial reserves, liquidity and leverage

-Material deterioration in enrollment or research leading to weaker operations LEGAL SECURITY

CU's planned Series 2018B bonds will be on parity with outstanding revenue debt and CP/ECP notes, secured by a pledge of net revenues (gross revenue less maintenance and operation expenses) of certain auxiliary enterprise facilities, including income derived from housing, dining, parking, rent of research facilities, and particular student fees. The parity obligations are also secured by a pledge of 100% of tuition revenues, revenue from indirect cost recovery, and mandatory facilities construction fees. There are no debt service reserve funds.

Fiscal year 2017 pledged net revenues totaled $1.2 billion, representing approximately 30% of the university's 2017 operating revenues (Moody's calculated) of $3.9 billion. Pro forma maximum annual debt service coverage by pledged revenues is estimated at 9x inclusive of 100% of tuition revenue. The estimated fiscal 2018 pledged net revenues of $1.3 billion covers pro forma debt service by approximately 9.5x.

USE OF PROCEEDS

Proceeds of the Series 2018B bonds will be used to fund various projects at the CU-Colorado Springs campus, including a sports medicine facility, athletic venue, visual and performing arts center, and infrastructure projects, and for costs of issuance.

PROFILE

The University of Colorado is the flagship public higher education institution for the state of Colorado with multiple campuses. The main campus is located in Boulder, with additional campuses in Downtown Denver, Aurora (Anschutz Medical campus) and Colorado Springs. CU is a member of the Association of American Universities. In fiscal 2017, CU recorded $3.9 billion in operating revenue, and in fall 2017 enrolled 53,997 FTE students.

METHODOLOGY

The principal methodology used in this rating was Higher Education published in December 2017. Please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.

REGULATORY DISCLOSURES

For ratings issued on a program, series or category/class of debt, this announcement provides certain regulatory disclosures in relation to each rating of a subsequently issued bond or note of the same series or category/class of debt or pursuant to a program for which the ratings are derived exclusively from existing ratings in accordance with Moody's rating practices. For ratings issued on a support provider, this announcement provides certain regulatory disclosures in relation to the credit rating action on the support provider and in relation to each particular credit rating action for securities that derive their credit ratings from the support provider's credit rating. For provisional ratings, this announcement provides certain regulatory disclosures in relation to the provisional rating assigned, and in relation to a definitive rating that may be assigned subsequent to the final issuance of the debt, in each case where the transaction structure and terms have not changed prior to the assignment of the definitive rating in a manner that would have affected the rating. For further information please see the ratings tab on the issuer/entity page for the respective issuer on www.moodys.com.

Regulatory disclosures contained in this press release apply to the credit rating and, if applicable, the related rating outlook or rating review.

Please see www.moodys.com for any updates on changes to the lead rating analyst and to the Moody's legal entity that has issued the rating.

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FitchRatings

Fitch Rates University of Colorado's Series 2018B Revenue Bonds 'AA+'; Outlook Stable

Fitch Ratings-Chicago-12 September 2018: Fitch Ratings has assigned a 'AA+' rating to the Regents of the University of Colorado's (CU) $68.6 million of series 2018B fixed rate university enterprise revenue bonds.

CU's existing Long-term rating is 'AA+'. The Short-term rating on CU's commercial paper program is 'F1+'.

The series 2018B bonds are expected to price via negation the week of September 17. Series 2018B bond proceeds will provide funds to support CU's capital program (specifically various projects at the Colorado Springs campus) and pay the cost of issuance.

The Rating Outlook is Stable.

SECURITY

Revenue bonds are secured by University of Colorado enterprise revenues, consisting primarily of auxiliary net revenues, indirect cost recovery revenues, student fees, 100% of tuition revenues, and other self-funded and research related services. Pledged revenues exclude state appropriations.

The 'F1+' Short-term rating is based on the adequacy of CU's self-liquidity to support the CP program and CU's strong overall credit quality.

KEY RATING DRIVERS

GOOD BALANCE SHEET RATIOS: CU's pro forma balance sheet resources relative to operations (62%) and debt (154%) compare favorably to 'AA' medians.

STRONG STUDENT DEMAND: CU's prominent position as the flagship institution for higher education and research in the state has fueled steady and significant enrollment growth over the past several years. The state recently approved measures to allow CU to accept more out- of-state students, which should bolster continued enrollment growth.

TRACK-RECORD OF PROFITABILITY: CU has a track record of breakeven to positive operating margins fueled by enrollment growth, profitable healthcare operations, and fairly diverse revenue sources. The negative operating margin in fiscal 2017 was driven by increased pension costs following a downward adjustment to the discount rate for the PERA multi-employer defined benefit pension plan. Fitch expects CU's operating margins to rebound to historical trends.

APPROVED PERA PENSION REFORM: Colorado's Governor recently signed legislation that will provide meaningful long-term reductions to defined benefit pension plan liabilities.

MODEST DEBT SERVICE COVERAGE: While CU's debt burden is manageable, maximum annual debt service (MADS) coverage was a thin 0.8x in fiscal 2017 because of modest results in the year due to a significant increase in non-cash pension expense (if not for the non-cash pension increase, MADS coverage would be 3.2x). MADS coverage should improve as operating results correct.

MANAGEABLE CAPITAL PLANS: CU has manageable capital spending plans. The university is planning to issue more than $300 million of new money debt in the coming years (including the current series 2018B issuance) to support capital spending.

RATING SENSITIVITIES

BALANCED OPERATIONS: The Stable Outlook assumes the University of Colorado will return to structurally balanced operations. Maintenance of strong balance sheet ratios supports the rating. Material improvement in balance sheet strength could warrant upward rating movement. Unexpected sustained adjusted operating losses that lead to balance sheet weakening could lead to downward rating pressure.

CREDIT PROFILE

CU is a comprehensive flagship graduate research university and the largest institution of higher education in Colorado. CU offers a full array of undergraduate, graduate, and professional programs on four campuses: the flagship location in Boulder, Colorado Springs, Denver, and the Anschutz Medical Campus in Aurora. The Anschutz campus is also home to the University of Colorado Hospital (UCHealth, rated AA). UCHealth is a separate legal entity, but maintains very tight alignment with CU's School of Medicine and is CU's primary teaching hospital.

CU's strong student demand growth is evidenced in total enrollment among its four campuses up 3.4% fall 2016 to 2017, totaling 65,375. Fitch expects continued enrollment growth in fall 2018. CU's net tuition and fees measured just over $1 billion in fiscal 2017.

GOOD BALANCE SHEET RATIOS

CU maintains good balance sheet resources. At audited fiscal year-end 2017 (June 30 year-end), available funds (AF, defined by Fitch as cash and investments less non-expendable restricted net assets) totaled $2.6 billion. AF covered fiscal 2017 operating expenses by a good 62% (AA category median is 48%) and debt by a favorable 159% (AA category median is 86%).

In addition, CU benefits from the support of various 501(c)(3) organizations, particularly the University of Colorado Foundation (CUF), which are not included in the university's available funds. CUF's long-term investment pool was valued at $1.67 billion as of unaudited June 30, 2018, and has grown steadily in recent years. CU and CUF have benefited from increasing fundraising in recent years. CU's endowment spend policy recently was reduced to a manageable 4%.

STRONG STUDENT DEMAND

Net tuition growth has been fueled by strong enrollment trends, which is the result of CU's prominent position as the flagship institution for higher education and research in the state. Total headcount across the four campuses increased 3.4% in fall 2017 to 65,375 from 63,202 in fall 2016 (undergraduate headcount was up 3.8% and graduate up 2.4%). This continues a trend that has been going on for years, as CU's total headcount is up more than 13% since 2012. Continued enrollment growth is expected in fall 2018, and CU has capacity to accommodate growth, particularly the Colorado Springs campus. Undergraduate applications have increased significantly in recent years (up 75% since 2012).

Student selectivity and matriculation are stable and student quality remains high. Student quality as measured by standardized test scores is above average. Among incoming freshmen as of fall 2017, CU's average ACT and SAT scores of 27 and 1,191, respectively, exceed national averages by significant margins.

The state recently approved measures to allow CU to increase its share of out-of-state students from 33% to as high as 45% (for each campus). This measure increases the university's operating flexibility and should ensure continued enrollment growth for high-quality students leading to student tuition and fee revenue growth.

TRACK-RECORD OF PROFITABILITY; EVOLVING PENSION DYNAMICS

CU has a track record of breakeven-to-positive margins. Between fiscal 2012 and fiscal 2016, CU's adjusted operating margin averaged 1.1% and the university was at least break-even in each year. In audited fiscal 2017, however, CU recorded an adjusted negative 4.1% operating margin.

The key driver behind the weaker operating results in fiscal 2017 was a significant increase in non-cash pension expenses related to changes in the PERA multi-employer defined benefit pension plan. In late fiscal 2017, PERA lowered its discount rate materially on the pension plan from 7.25% to 5.26%. Additionally, PERA adopted new mortality tables that assumed longer longevity among plan retirees. Consequently, the PERA changes resulted in a $312 million unplanned increase in non-cash pension expense in fiscal 2017. CU's liability to PERA increased 74% from $1.18 billion at year-end 2016 to $2.05 billion at year-end 2017 (a 74% increase). In addition, since these changes were not adopted until the year end, CU management did not have time to react with revenue enhancements and expense savings.

Fitch notes that the share of CU employees participating in the PERA defined benefit pension plan has been roughly flat in recent years, as the number of plan participants measured approximately 8,500 in 2013 and 8,700 in 2017. Over this same period, the number of participants in CU's defined contribution plan increased from approximately 9,700 to 16,200. Consequently, CU's proportionate share of PERA is decreasing. New employees without previous PERA service do not participate in PERA at CU. Over the long term, this will help to reduce the university's liability.

The pension changes notwithstanding, CU's core operations remain favorable, as the university has benefited from steady growth in net tuition and fees, and diverse and growing research (with a particular focus on expanding non-federal funding sources). To this end, CU has a history of fairly diverse revenues sources, which in fiscal 2017 included student tuition and fees (32%), grants and contracts (25%), and healthcare operations (22%). Moreover, prior to the year-end PERA pension changes, CU's operating trends in fiscal 2017 were ahead of fiscals 2016 and 2015.

Looking forward, Fitch expects margins in future years to be better than fiscal 2017 and in-line with historical trends (Fitch generally expects public universities to record at least breakeven results). CU will continue to benefit from positive enrollment trends and diversified research efforts. Additionally, the governor's budget has recommended automatic annual state higher education funding increases of at least 7% in fiscal 2020 through fiscal 2022.

RECENT PERA PENSION RELIEF

In June 2018, Colorado's Governor signed legislation (SB 18-200) that will provide meaningful long-term relief to defined benefit pension plan liabilities. Key highlights include: contributions from employees increase two percentage points (phased in over three years); employer contributions increase one percentage point (starting July 2019); the state will directly appropriate $225 million per year to PERA for 30 years (beginning in July 2018); current retirees will receive no COLA increases for two years and future retirees will not receive COLA for the first three years of retirement (after which COLA is capped at 1.5% per year); increase the retirement eligibility age to 64 for new hires; and in the event revenues into PERA are significantly above or below projections, the legislation includes provisions that automatically adjust employee and employer contributions and the COLA to ensure solvency.

MANAGEABLE DEBT BURDEN, MODEST DEBT SERVICE COVERAGE

CU's pro forma debt burden is manageable but debt coverage ratios are thin based on fiscal 2017 results. The university's total bonded debt measures $1.52 billion; inclusive of capital leases, the debt equivalent of operating leases (measured as a 5x multiplier of lease expense), and notes payable, total pro forma long-term debt is $1.61 billion. Pro forma MADS of $132.9 million translates to a moderately low MADS burden of 3.3% (AA median is 4.8%). Pro forma MADS coverage is a thin 0.8x, based on fiscal 2017 results due to the aforementioned significant increase in pension expense (AA median is 1.8x). If not for the $312 million increase in non-cash pension expense, CU's MADS coverage would be a strong 3.2x and coverage should improve in fiscal 2018 and beyond.

MANAGEABLE CAPITAL SPENDING PLANS

CU has manageable capital plans given its considerable scope of operations. Key current and future projects to be funded by the current and expected upcoming financings include an academic sports medicine building and sports and infrastructure upgrades at Colorado Springs, a research facility at the Anschutz medical campus, and an aerospace engineering building, undergraduate housing and an academic music school addition in Boulder.

To support capital plans, CU is expected to issue more than $300 million of new money debt in the coming years. This includes the current $69 million series 2018B issuance. Fitch views the debt plans as manageable, particularly considering CU's front-loaded debt service amortization schedule (the university will pay off a like amount of debt by the time the new debt is fully issued).

'F1+' SHORT-TERM RATING

The 'F1+' Short-term rating is based on the sufficiency of CU's liquid resources and written procedures to fund any un-remarketed put and/or commercial paper roll on the planned $200 million of maximum potential CP debt and supported by self-liquidity.

Based on Fitch's Rating Criteria related to US Public Finance Short Term Debt, CU had "eligible" cash, investments, and dedicated bank lines of credit in excess of the 125% threshold of its maximum self -liquidity funding exposure for which supports the 'F1+' rating.

Using a conservative calculation which includes i) CU's cash and bank credit facilities, ii) conservative discounts for US Treasury / Agency debt, municipal bonds and corporate bonds, and iii) a maximum draw under $200 million tax-exempt and taxable CP program, pro forma coverage is 2.3x (based on discounted liquidity as of July 31, 2018).

Relevant rating committee date: May 24, 2018.
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Additional information is available on www.fitchratings.com

Applicable Criteria

Rating Criteria for Public-Sector, Revenue-Supported Debt (pub. 26 Feb 2018) (https://www.fitchratings.com/site/re/10020113)
U.S. Public Finance College and University Rating Criteria (pub. 26 Apr 2017) (https://www.fitchratings.com/site/re/897285)
U.S. Public Finance Short-Term Debt Rating Criteria (pub. 01 Nov 2017) (https://www.fitchratings.com/site/re/905637)

Additional Disclosures

Solicitation Status (https://www.fitchratings.com/site/pr/10044023#solicitation)
Endorsement Policy (https://www.fitchratings.com/regulatory)

Table 1

Outstanding Long-Term Obligations of the University of Colorado As of June 30, 2019				
Long-Term Obligations	**Final Maturity**	**Interest Rate**	**Original Amount Issued**	**Outstanding**
Revenue Bonds				
University Enterprise Revenue Refunding Bonds, Series 2007A	2033	5.00	184,180,000	27,725,000
Tax-Exempt University Enterprise Refunding Revenue Bonds, Series 2009C	2026	4.00	24,510,000	2,270,000
Taxable University Enterprise Revenue Bonds, Series 2010A (BAB)	2035	3.67 to 3.72	35,510,000	25,060,000
Tax-Exempt University Enterprise Refunding Revenue Bonds, Series 2010B	2023	4.00 to 5.00	56,905,000	15,020,000
Taxable University Enterprise Revenue Bonds, Series 2010C (QECB)	2020	3.72 to 3.77	4,375,000	2,540,000
University Enterprise Revenue Bonds, Series 2011A	2041	4.00 to 5.00	203,425,000	29,825,000
University Enterprise Revenue Refunding Bonds, Series 2011B	2024	3.00 to 5.00	52,600,000	30,585,000
University Enterprise Revenue Refunding Bonds, Series 2012A-1	2029	2.00 to 5.00	121,850,000	114,515,000
University Enterprise Revenue Refunding Bonds, Series 2012A-2	2035	3.25 to 5.00	53,000,000	43,015,000
University Enterprise Revenue Refunding Bonds, Series 2012A-3	2030	3.00 to 5.00	47,165,000	33,935,000
University Enterprise Revenue Bonds, Series 2012B	2042	5.00	95,705,000	16,020,000
Tax-Exempt University Enterprise Revenue Bonds, Series 2013A	2043	5.00	142,460,000	11,075,000
Taxable University Enterprise Revenue Bonds, Series 2013B	2043	2.639 to 5.177	11,245,000	10,295,000
Tax-Exempt University Enterprise Revenue Bonds, Series 2014A	2046	5.00	203,485,000	32,980,000
Tax-Exempt University Enterprise Refunding Revenue Bonds, Series 2014B1	2034	2.00 to 5.00	100,440,000	95,180,000
Tax-Exempt University Enterprise Refunding Revenue Bonds, Series 2015A	2038	2.00 to 5.00	102,450,000	94,860,000
Tax-Exempt University Enterprise Refunding Revenue Bonds, Series 2015B	2033	2.00 to 5.00	3,925,000	2,800,000
Taxable University Enterprise Refunding Revenue Bonds, Series 2015C	2027	1.781 to 3.039	71,325,000	65,135,000
Tax-Exempt University Enterprise Revenue Bonds, Series 2016A	2047	1.50 to 5.00	31,430,000	30,675,000
Tax-Exempt University Enterprise Revenue Refunding Bonds, Series 2016B-1	2039	2.22 to 5.00	156,810,000	154,450,000
Tax-Exempt University Enterprise Revenue Refunding Bonds, Series 2017A-1	2034	2.00 to 5.00	66,930,000	51,485,000
Tax-Exempt University Enterprise Revenue Refunding Bonds, Series 2017A-2	2046	3.00 to 5.00	471,390,000	470,155,000
Tax-Exempt University Enterprise Revenue Refunding Bonds, Series 2018A	2020	Variable	48,015,000	48,015,000
Tax-Exempt University Enterprise Revenue Refunding Bonds, Series 2018B	2048	2.50 to 5.00	64,360,000	64,360,000
Total Revenue Bonds			**$2,353,490,000**	**$1,471,975,000**
Other Long-Term Obligations				
Fitzsimons Redevelopment Authority, Series 2014 (1)	2025	2.3	11,695,000	6,991,000
Total Other Long-Term Obligations			**$11,695,000**	**$6,991,000**
Total Revenue Bonds & Other Obligations			**$2,365,185,000**	**$1,478,966,000**

Issued to refund bonds, the proceeds of which financed the University Physicians Inc. (UPI) building.

Table 2

Summary of Approved Projects							
UC Boulder Campus	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**
Aerospace Engineering[a]	cp	$ 55,546,000					
Williams Village East-Housing[a]	cp	$ 87,030,000					
Fleming Renovation(a)	cp	$ 10,975,000					
IMIG Music(a)	cp	cp	$ 45,600,000				
Campus Total		$ 153,551,000	$ 45,600,000				
UC Colorado Springs Campus		none requested					
CU Anschutz Medical Campus							
Anschutz Health Sciences Building(a)			cp	$ 135,718,000			
Central Utility Project	$ -	$ 33,400,000	$ -				
Campus Total	**$ -**	$ 33,400,000		$ 135,718,000			
UC Denver Campus							
Series 2018A & Refinancing			$ 48,500,000				
First Year Housing Project		$ 63,000,000					
Campus Total	**$ -**	$ 63,000,000	$ 48,500,000				
System Total		**$ 249,951,000**	**$ 94,100,000**	**$ 135,718,000**			

(a) Initially financed with commercial paper. Interest during construction capitalized at assumed rate of 2% on outstanding balance. Costs of issuance assumed at 1%. Take out financing assumed at 4% over 25 years.

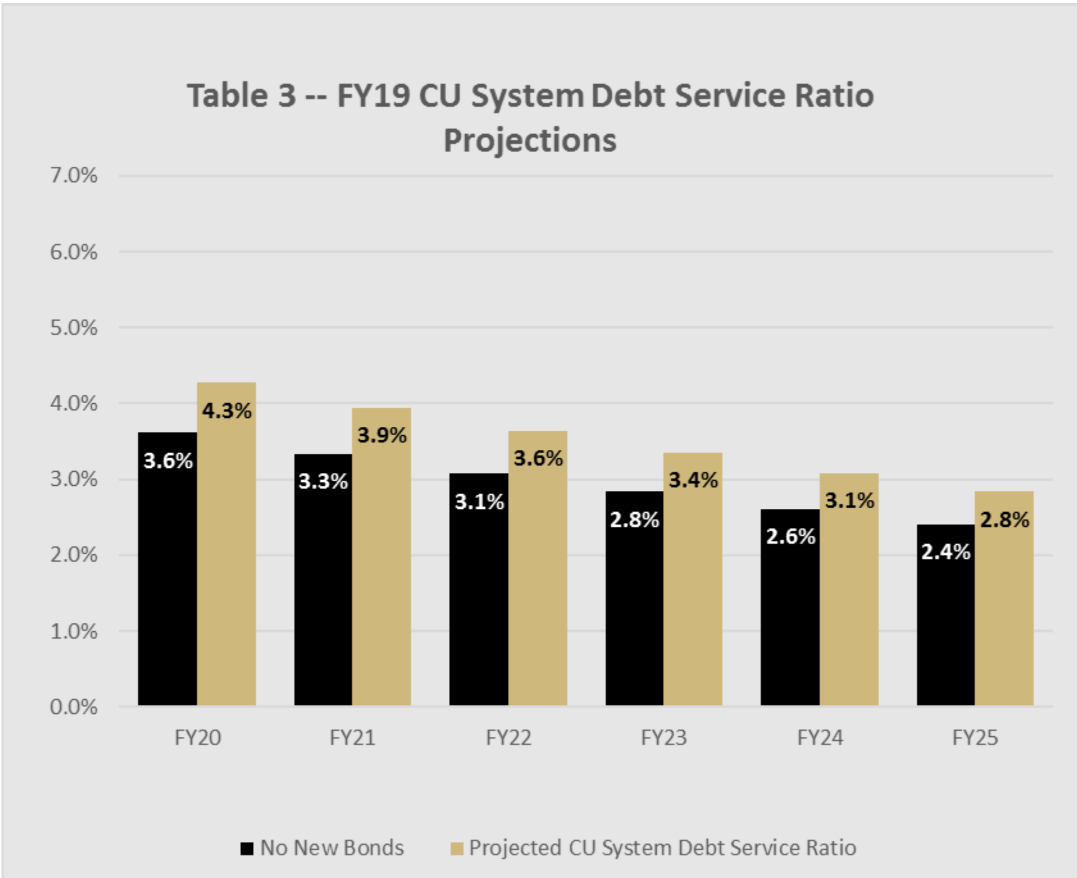
Table 3 -- FY19 CU System Debt Service Ratio Projections
7.0%
6.0%
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
3.6%
4.3%
3.3%
3.9%
3.1%
3.6%
2.8%
3.4%
2.6%
3.1%
2.4%
2.8%
FY20
FY21
FY22
FY23
FY24
FY25
No New Bonds
Projected CU System Debt Service Ratio

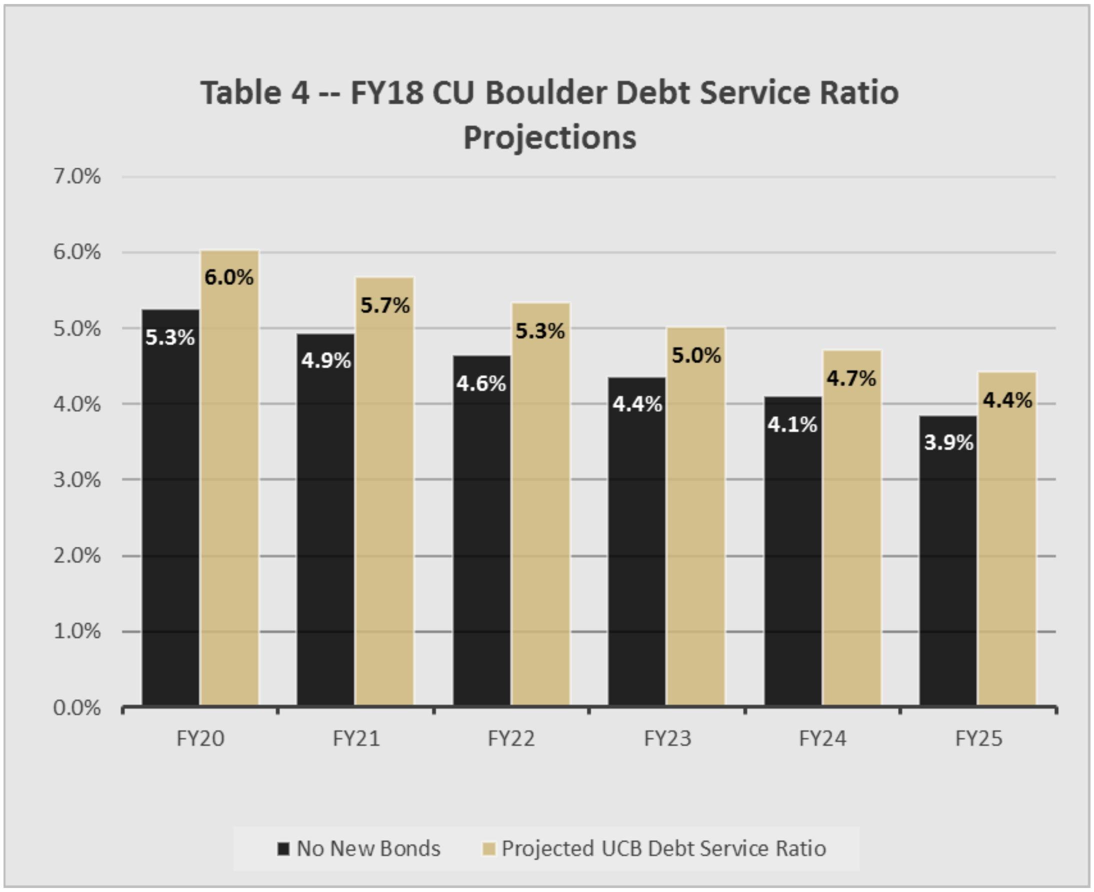
Table 4 -- FY18 CU Boulder Debt Service Ratio Projections
7.0%
6.0%
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
5.3%
6.0%
4.9%
5.7%
4.6%
5.3%
4.4%
5.0%
4.1%
4.7%
3.9%
4.4%
FY20
FY21
FY22
FY23
FY24
FY25
No New Bonds
Projected UCB Debt Service Ratio

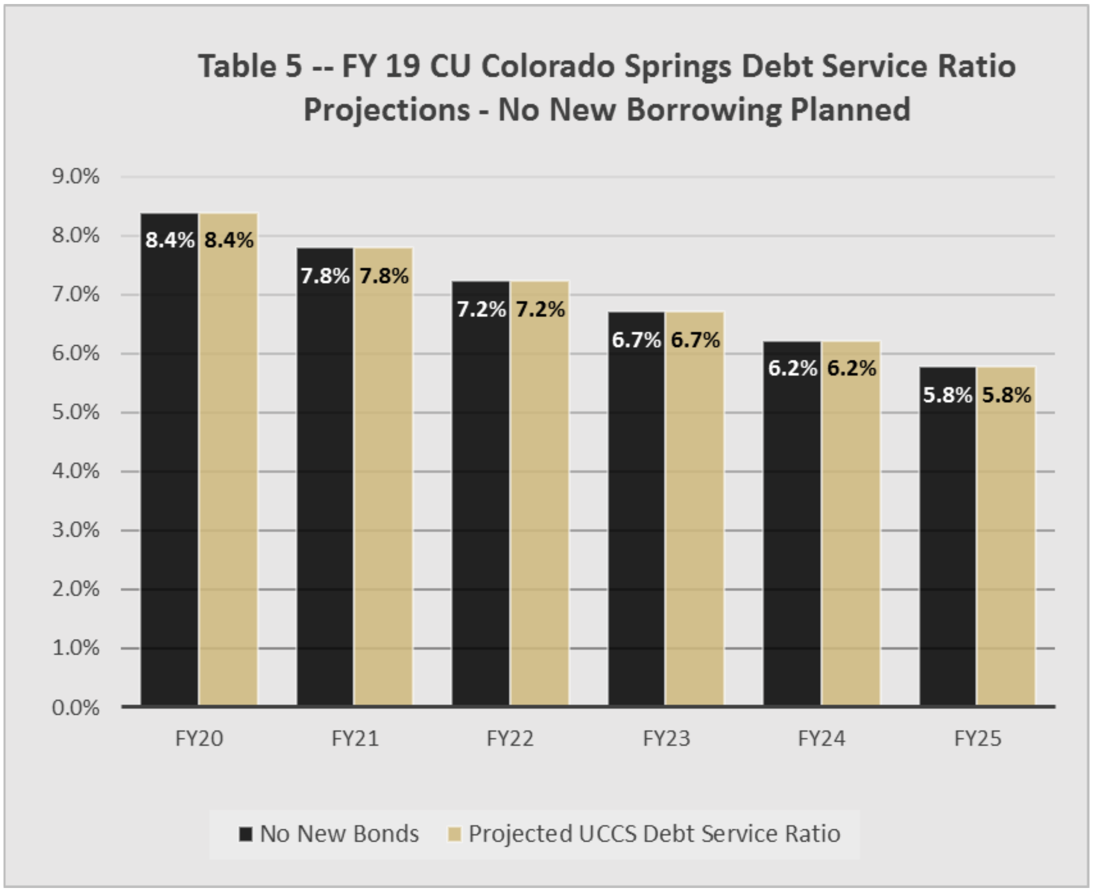
Table 5 -- FY 19 CU Colorado Springs Debt Service Ratio Projections - No New Borrowing Planned
9.0%
8.0%
7.0%
6.0%
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
8.4%
8.4%
7.8%
7.8%
7.2%
7.2%
6.7%
6.7%
6.2%
6.2%
5.8%
5.8%
FY20
FY21
FY22
FY23
FY24
FY25
No New Bonds
Projected UCCS Debt Service Ratio

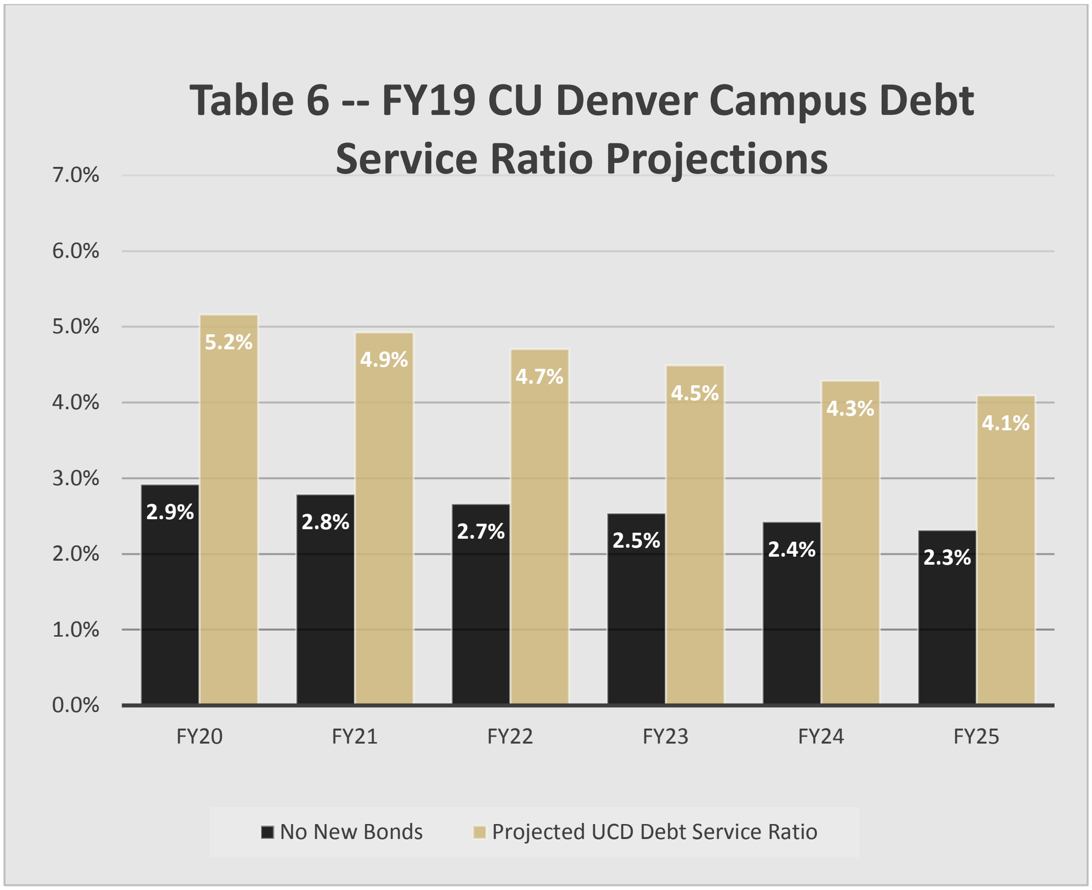
Table 6 -- FY19 CU Denver Campus Debt Service Ratio Projections
7.0%
6.0%
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
2.9%
5.2%
2.8%
4.9%
2.7%
4.7%
2.5%
4.5%
2.4%
4.3%
2.3%
4.1%
FY20
FY21
FY22
FY23
FY24
FY25
No New Bonds
Projected UCD Debt Service Ratio

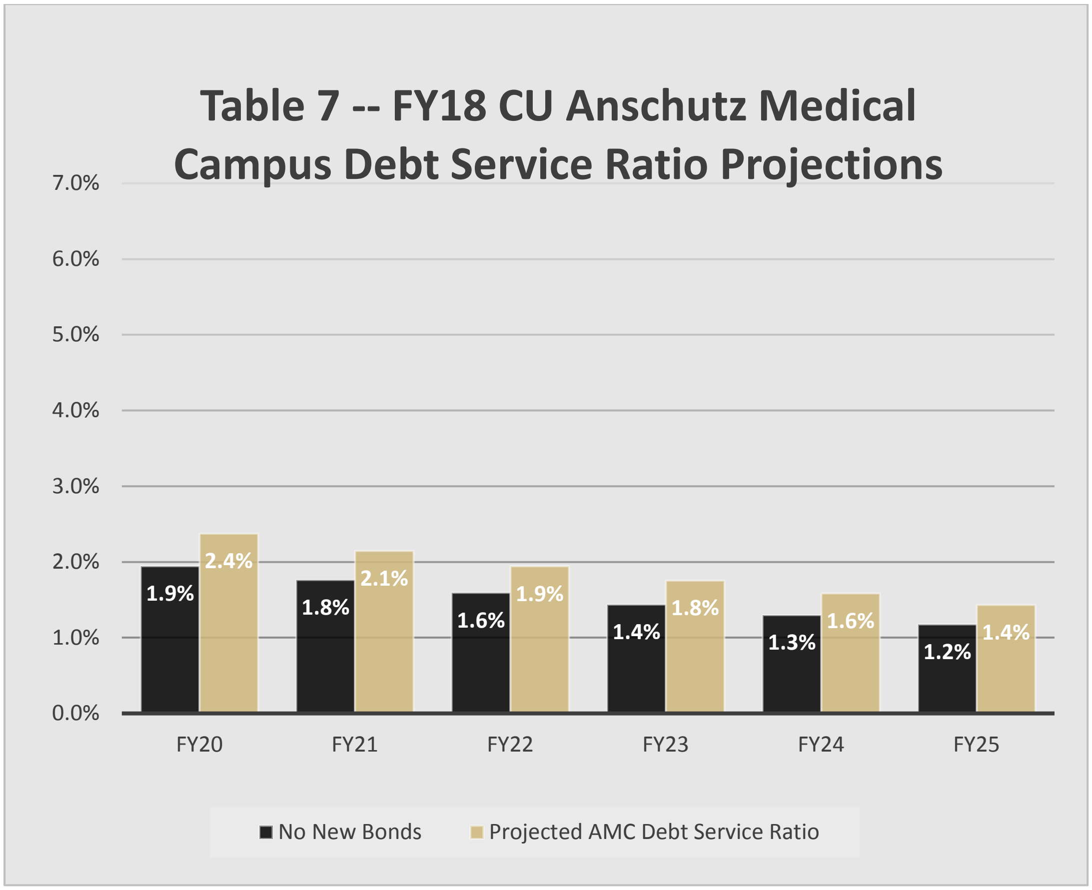
Table 7 -- FY18 CU Anschutz Medical Campus Debt Service Ratio Projections
7.0%
6.0%
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
1.9%
2.4%
1.8%
2.1%
1.6%
1.9%
1.4%
1.8%
1.3%
1.6%
1.2%
1.4%
FY20
FY21
FY22
FY23
FY24
FY25
No New Bonds
Projected AMC Debt Service Ratio