

FY20-25 Financial Forecast

Board of Trustees: Administration & Finance Committee

December 5, 2019



University of Massachusetts

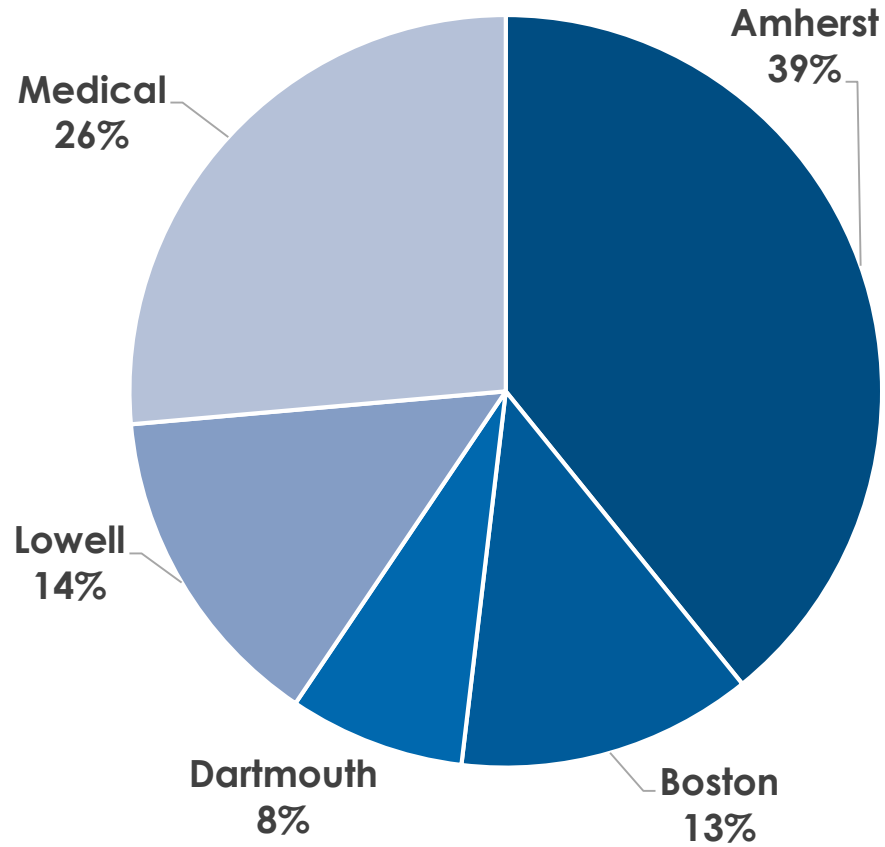
Amherst • Boston • Dartmouth • Lowell • Medical School • UMassOnline

Agenda

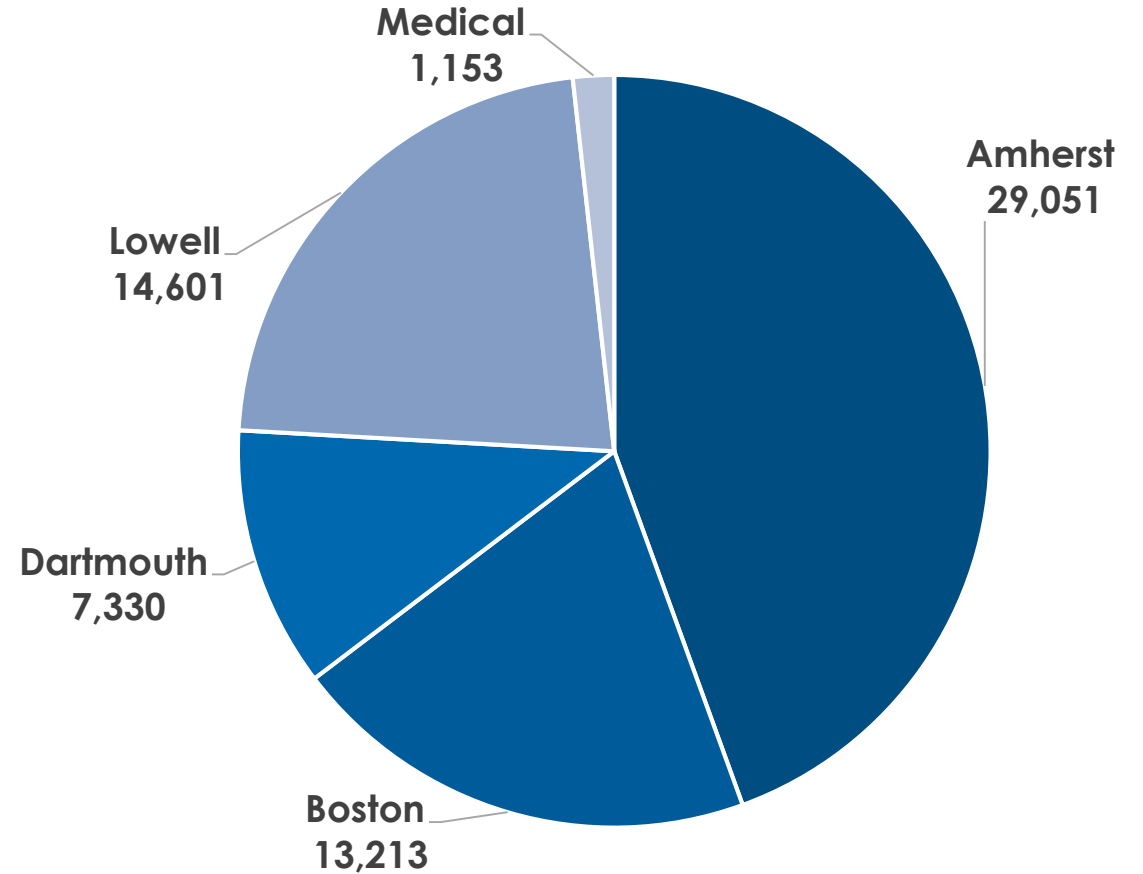
- **Financial Forecast Overview**
- **Highlights & Key Take Aways**
- **Revenues**
- **Expenses**
- **Ratios**
- **Appendices: Campus Data**

University Overview

FY19 Revenue = \$3.5 billion



FY19 Student FTEs = 65,348



Financial Forecast Overview

- Refreshed Annually
- Campus 5-year Strategic Plans; Enrollment strategy
- University 5-year Capital Plan
- Annual State Funding Request
- Communication to Stakeholders – State, Rating Agencies, Granting Entities

Highlights & Key Take Aways

UMass Demonstrates Strong Fiscal Management

Excellent Credit Quality

- Moody's Aa2, stable
- Outlook changed from negative to stable (May 2018); comparatively Higher Ed sector is negative
- Aa2 rating is highest among our New England peers
- AA and AA- by Fitch and Standard & Poor's

Strong Student Demand

- Enrollment growth continues despite demographic shift – varies by campus
- UMass continues to grow in all phases of its admissions funnel
- University funded financial aid investments continue.

Best Practices in Fiscal Oversight

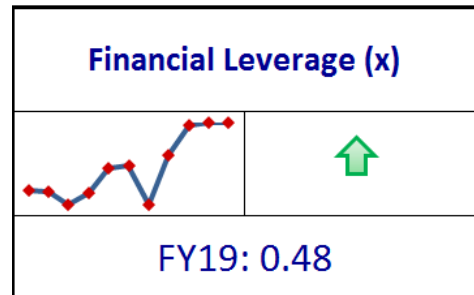
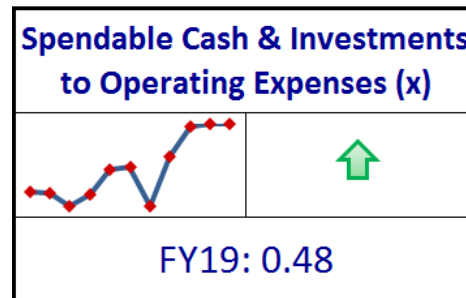
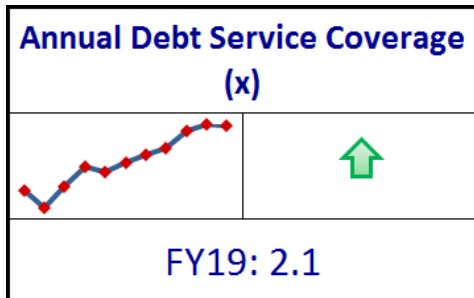
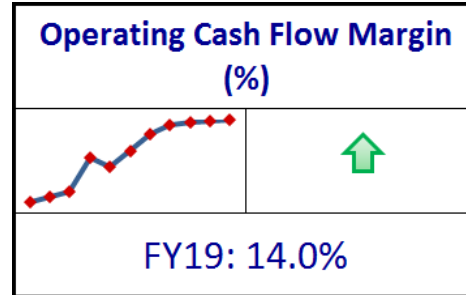
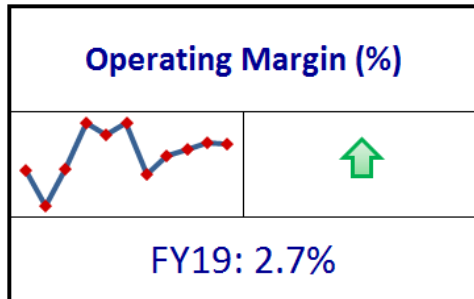
- Strengthened oversight and budgetary controls; including regular quarterly projections by campus
- Multi-year planning for financial sustainability
- Shared Services – implement Unified Procurement Services Tea,
- Strategic university policies adopted; Reserve Policy, enhanced capital planning & approval
- Deliberate and strategic long-range capital planning

Improved Operating Performance

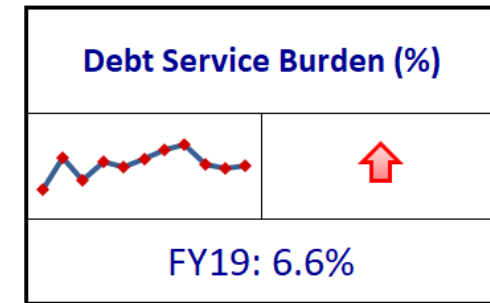
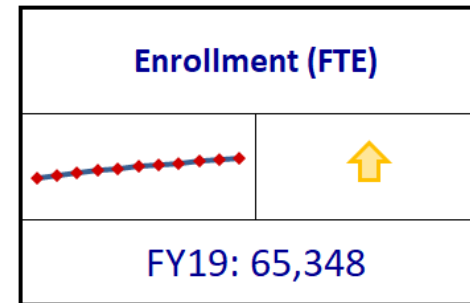
- Board directed operating margins improving to 2.0%
- Commitment to student affordability; modest tuition increase of 2.5%
- Consistent state operating appropriations based on collective bargaining
- Good revenue diversity, including tuition, state support & research activity

Key Take Aways

Improving



On Watch



Revenue

Revenue: Modeling Assumptions

President's Office Guidance

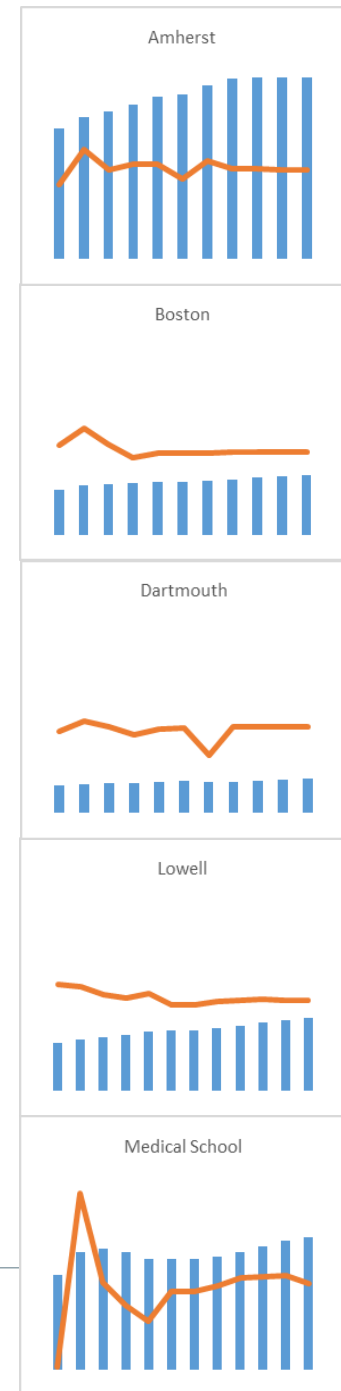
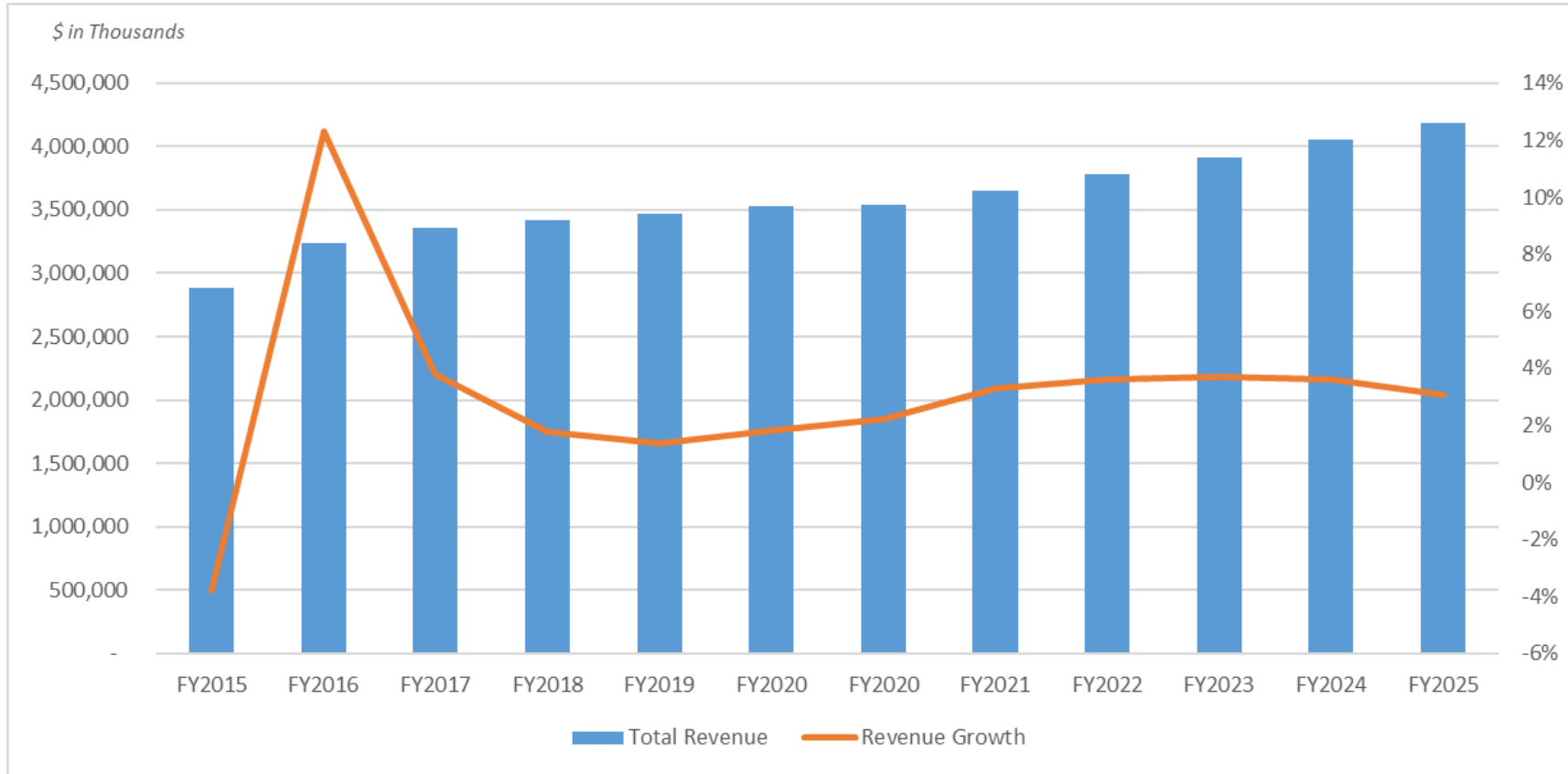
State Appropriation	0.0%
State Collective Bargaining	2.0%
Modeled Tuition: In State UG	No more than 2.5%
Modeled Tuition: Out of State UG	Campus determined
Modeled Tuition: Grad	Campus determined
Mandatory : Tech Fee	No Increase
Mandatory: Student Activity Fee	Case by Case
Non-Mandatory Fees	Case by Case

Campus Specific

Tuition: Out of State & Graduate
Enrollment

- State Appropriation: Base increase to reflect State portion of assumed collective bargaining increase \$12-13 million annually.
- Tuition increases:
 - In State Undergraduate = 2.5%
 - Out of State and Graduate = up to 3.0%
- Enrollment: Increase of 3.7% over the projection period (0.9% annual average) based on campus plans and capacity.

University Revenue: Annual Changes



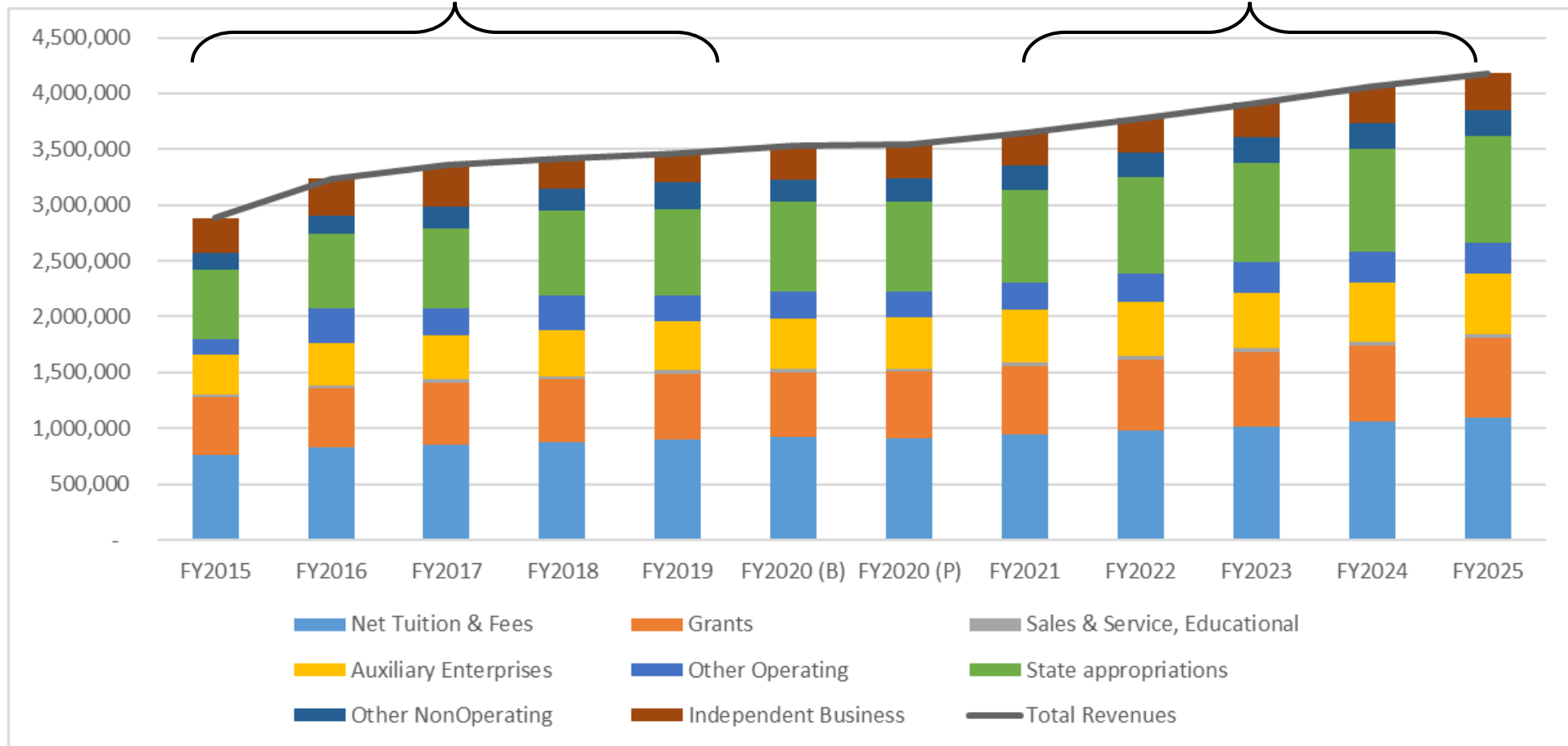
University Revenue: by Revenue Category

\$ in Thousands	Actual					Budget	Q1 Projection	Forecast					Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
Gross Tuition & Fees	987,384	1,070,841	1,136,540	1,185,826	1,223,734	1,263,315	1,262,676	1,307,381	1,361,103	1,413,455	1,465,157	1,518,067	210,686	
<i>Gross Tuition & Fees Growth</i>		8.5%	6.1%	4.3%	3.2%	3.2%	3.2%	3.5%	4.1%	3.8%	3.7%	3.6%	16.1%	3.8%
Tuition Discounts	(222,164)	(244,025)	(288,708)	(311,000)	(328,830)	(342,748)	(347,148)	(360,961)	(376,071)	(387,908)	(400,549)	(413,262)	(52,301)	
<i>Tuition Discounts Growth</i>		9.8%	18.3%	7.7%	5.7%	4.2%	5.6%	5.3%	4.2%	3.1%	3.3%	3.2%	14.5%	3.4%
Net Tuition & Fees	765,220	826,816	847,832	874,825	894,904	920,567	915,528	946,420	977,945	1,018,318	1,057,235	1,097,284	150,864	
<i>Net Tuition & Fees Growth</i>		8.0%	2.5%	3.2%	2.3%	2.9%	2.3%	2.8%	3.3%	4.1%	3.8%	3.8%	15.9%	3.8%
Grants	510,741	528,352	560,081	560,990	593,086	579,454	589,007	613,084	636,421	662,182	688,569	715,608	102,524	
<i>Grants Growth</i>		3.4%	6.0%	0.2%	5.7%	-2.3%	-0.7%	5.8%	3.8%	4.0%	4.0%	3.9%	16.7%	3.9%
Sales & Service, Educational	25,601	27,500	28,910	30,591	34,984	29,350	30,278	30,912	31,624	32,356	33,107	33,881	2,968	
<i>Sales & Service, Educational Growth</i>		7.4%	5.1%	5.8%	14.4%	-16.1%	-13.5%	5.3%	2.3%	2.3%	2.3%	2.3%	9.6%	2.3%
Auxiliary Enterprises	362,193	383,281	400,822	416,733	441,795	456,696	459,456	471,807	489,646	505,098	520,315	535,895	64,087	
<i>Auxiliary Growth</i>		5.8%	4.6%	4.0%	6.0%	3.4%	4.0%	3.3%	3.8%	3.2%	3.0%	3.0%	13.6%	3.2%
Other Operating	136,954	307,286	233,717	311,119	222,076	236,776	233,070	238,197	254,518	271,021	287,598	285,151	46,954	
<i>Other Operating Growth</i>		124.4%	-23.9%	33.1%	-28.6%	6.6%	5.0%	0.6%	6.9%	6.5%	6.1%	-0.9%	19.7%	4.7%
State	621,200	669,748	720,817	751,894	780,222	805,515	801,974	829,659	857,827	886,723	915,316	945,042	115,383	
<i>State Growth</i>		7.8%	7.6%	4.3%	3.8%	3.2%	2.8%	3.0%	3.4%	3.4%	3.2%	3.2%	13.9%	3.3%
Other Non Operating	144,964	162,741	195,089	197,142	231,504	199,096	211,578	217,880	224,548	230,165	236,408	241,025	23,145	
<i>Other Non-Operating Growth</i>		12.3%	19.9%	1.1%	17.4%	-14.0%	-8.6%	9.4%	3.1%	2.5%	2.7%	2.0%	10.6%	2.6%
Independent Business Lines (Med)	312,077	330,259	371,618	274,555	266,509	301,131	301,131	297,454	303,877	310,498	318,321	326,854	29,400	
<i>Independent Business Lines Growth</i>		5.8%	12.5%	-26.1%	-2.9%	13.0%	13.0%	-1.2%	2.2%	2.2%	2.5%	2.7%	9.9%	2.4%
Total	2,878,948	3,235,982	3,358,886	3,417,849	3,465,080	3,528,585	3,542,022	3,645,415	3,776,406	3,916,361	4,056,869	4,180,740	535,325	
<i>Total Growth</i>		12.4%	3.8%	1.8%	1.4%	1.8%	2.2%	3.3%	3.6%	3.7%	3.6%	3.1%	14.7%	3.5%

University Revenue: Diverse Sources

Average Annual Growth FY15-19:
\$145.8 million or 4.8%

Average Annual Growth FY21-25:
\$133.8 million or 3.5%



Revenue: by Campus

\$ in Thousands	Actual					Budget	Q1 Projection	Forecast					Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
Amherst	1,082,614	1,174,441	1,216,054	1,276,643	1,341,052	1,359,006	1,382,685	1,437,651	1,493,843	1,551,845	1,607,156	1,663,164	225,513	
Amherst Growth		8.5%	3.5%	5.0%	5.0%	1.3%	3.1%	5.8%	3.9%	3.9%	3.6%	3.5%	15.7%	3.7%
Boston	376,122	406,402	423,334	426,589	436,467	442,523	445,647	451,352	461,054	470,823	480,771	490,787	39,436	
Boston Growth		8.1%	4.2%	0.8%	2.3%	1.4%	2.1%	2.0%	2.1%	2.1%	2.1%	2.1%	8.7%	2.1%
Dartmouth	231,692	241,281	248,385	250,628	256,592	263,485	251,836	252,940	260,139	267,703	275,626	283,517	30,577	
Dartmouth Growth		4.1%	2.9%	0.9%	2.4%	2.7%	-1.9%	-4.0%	2.8%	2.9%	3.0%	2.9%	12.1%	2.9%
Lowell	390,156	418,400	439,843	459,042	484,770	498,589	497,574	516,902	536,840	558,599	579,526	601,307	84,405	
Lowell Growth		7.2%	5.1%	4.4%	5.6%	2.9%	2.6%	3.7%	3.9%	4.1%	3.7%	3.8%	16.3%	3.9%
President's Office	99,843	107,621	117,659	119,219	124,478	132,526	133,353	138,629	141,119	143,659	146,250	148,891	10,262	
President's Office Growth		7.8%	9.3%	1.3%	4.4%	6.5%	7.1%	4.6%	1.8%	1.8%	1.8%	1.8%	7.4%	1.8%
Subtotal	2,180,427	2,348,145	2,445,275	2,532,121	2,643,359	2,696,129	2,711,095	2,797,474	2,892,995	2,992,629	3,089,330	3,187,667	390,193	
Subtotal Growth		7.1%	4.0%	3.4%	4.2%	2.0%	0.6%	3.6%	3.3%	3.3%	3.1%	3.1%	13.9%	3.2%
Medical School	774,094	963,663	991,957	965,654	903,378	911,346	911,346	929,968	967,079	1,009,073	1,054,586	1,081,861	151,894	
Medical School Growth		24.5%	2.9%	-2.7%	-6.4%	0.9%	0.9%	2.0%	4.0%	4.3%	4.5%	2.6%	16.3%	3.9%
Total	2,878,948	3,235,982	3,358,886	3,417,849	3,465,080	3,528,585	3,542,022	3,645,415	3,776,406	3,916,361	4,056,869	4,180,740	535,325	
Total Growth		12.4%	3.8%	1.8%	1.4%	1.8%	2.2%	3.3%	3.6%	3.7%	3.6%	3.1%	14.7%	3.5%

Revenue: by Program Area

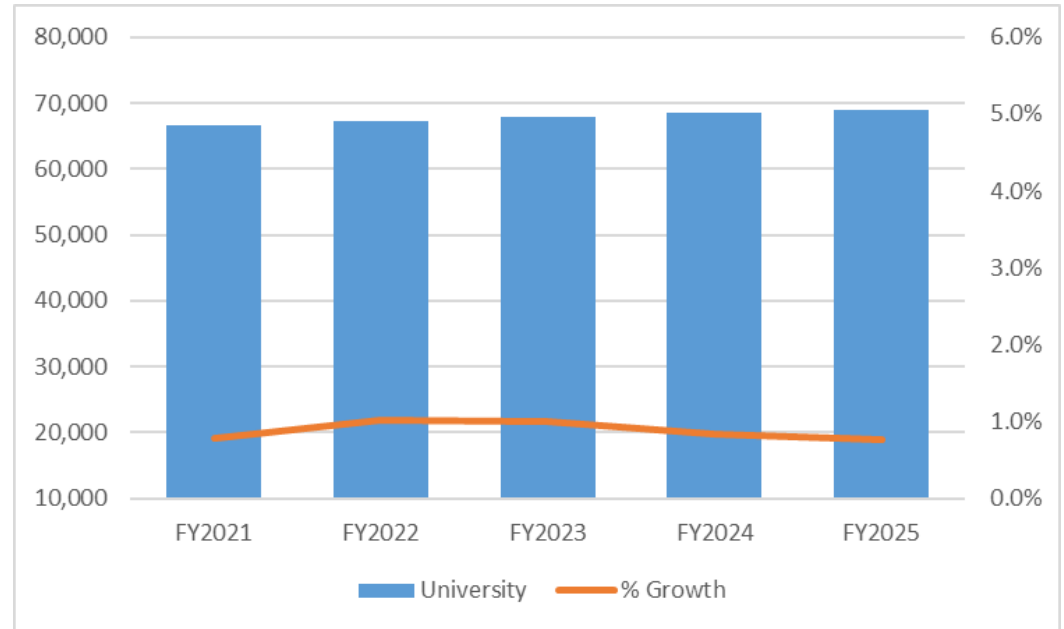
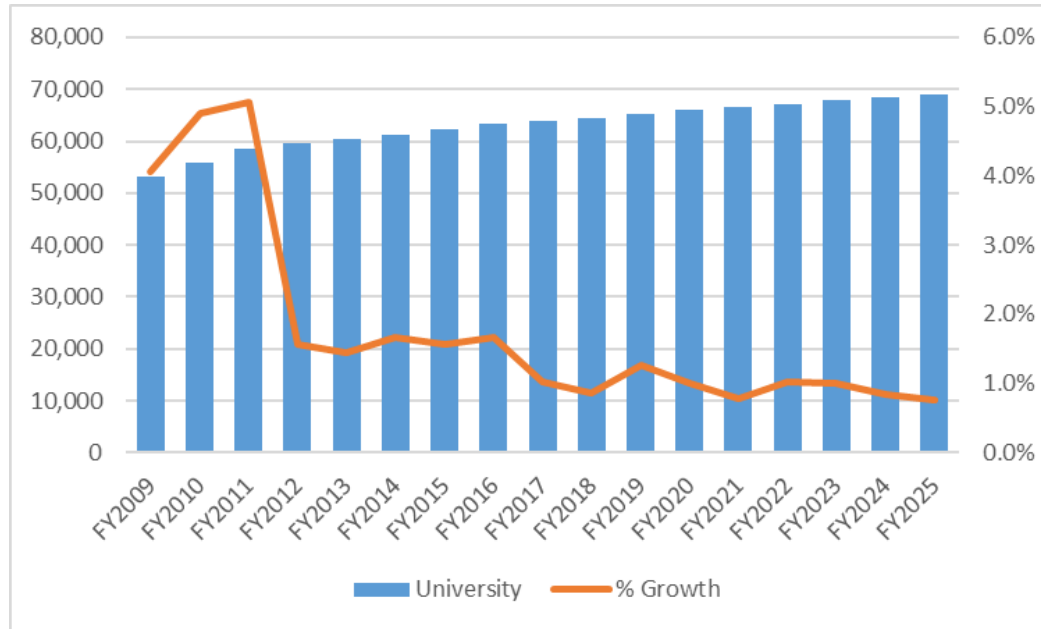
	\$ in Thousands					Budget	Q1 Projection	Forecast					Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
(1) E&G (ABDL)	1,563,696	1,673,418	1,749,548	1,796,653	1,783,664	1,828,276	1,833,063	1,893,493	1,957,177	2,026,394	2,092,120	2,159,032	265,538	
<i>E&G Growth</i>		7.0%	4.5%	2.7%	-0.7%	2.5%	2.8%	3.6%	3.4%	3.5%	3.2%	3.2%	14.0%	3.3%
Research (ABDL)	219,523	232,703	243,349	248,269	264,247	267,403	273,375	282,966	292,314	301,993	312,019	322,399	39,432	
<i>Research Growth</i>		6.0%	4.6%	2.0%	6.4%	1.2%	3.5%	5.8%	3.3%	3.3%	3.3%	3.3%	13.9%	3.3%
Auxiliary (ABDL)	323,883	348,045	365,029	390,123	414,544	426,832	429,942	440,809	457,953	472,689	487,264	502,187	61,378	
<i>Auxiliary Growth</i>		7.5%	4.9%	6.9%	6.3%	3.0%	3.7%	3.3%	3.9%	3.2%	3.1%	3.1%	13.9%	3.3%
(2) Other (Med)	511,148	722,615	657,066	764,367	719,185	692,779	691,721	713,880	747,655	786,740	828,306	850,693	136,813	
<i>Other Growth</i>		41.4%	-9.1%	16.3%	-5.9%	-3.7%	-3.8%	3.0%	4.7%	5.2%	5.3%	2.7%	19.2%	4.5%
Law School	3,401	3,430	3,280	3,990	4,556	4,559	5,185	5,694	6,012	6,318	6,786	7,344	1,650	
<i>Law School Growth</i>		0.9%	-4.4%	21.6%	14.2%	0.1%	13.8%	24.9%	5.6%	5.1%	7.4%	8.2%	29.0%	6.6%
Independent Business Lines (Med)	348,487	349,215	391,643	292,199	278,857	308,736	308,736	308,570	315,295	322,228	330,373	339,236	30,666	
<i>Independent Business Lines Growth</i>		0.2%	12.1%	-25.4%	-4.6%	10.7%	10.7%	-0.1%	2.2%	2.2%	2.5%	2.7%	9.9%	2.4%
(3) Total	2,885,171	3,252,580	3,326,336	3,416,188	3,465,053	3,528,585	3,542,022	3,645,415	3,776,406	3,916,361	4,056,869	4,180,740	535,325	
<i>Total Growth</i>		12.7%	2.3%	2.7%	1.4%	1.8%	2.2%	3.3%	3.6%	3.7%	3.6%	3.1%	14.7%	3.5%

(1) E&G = Education & General; ABDL: Amhers, Boston, Dartmouth, Lowell; Total includes Online revenue

(2) Other: 85% of revenues are for the Medical School Research and Education; the remaining 15% are for ADBL revenues not reflected in other programs

(3) Revenue by program (FY15-18) excludes unrealized gains and losses consistent with the total revenue used to calculate the Operating Margin

Revenue Sources: Enrollment Trend

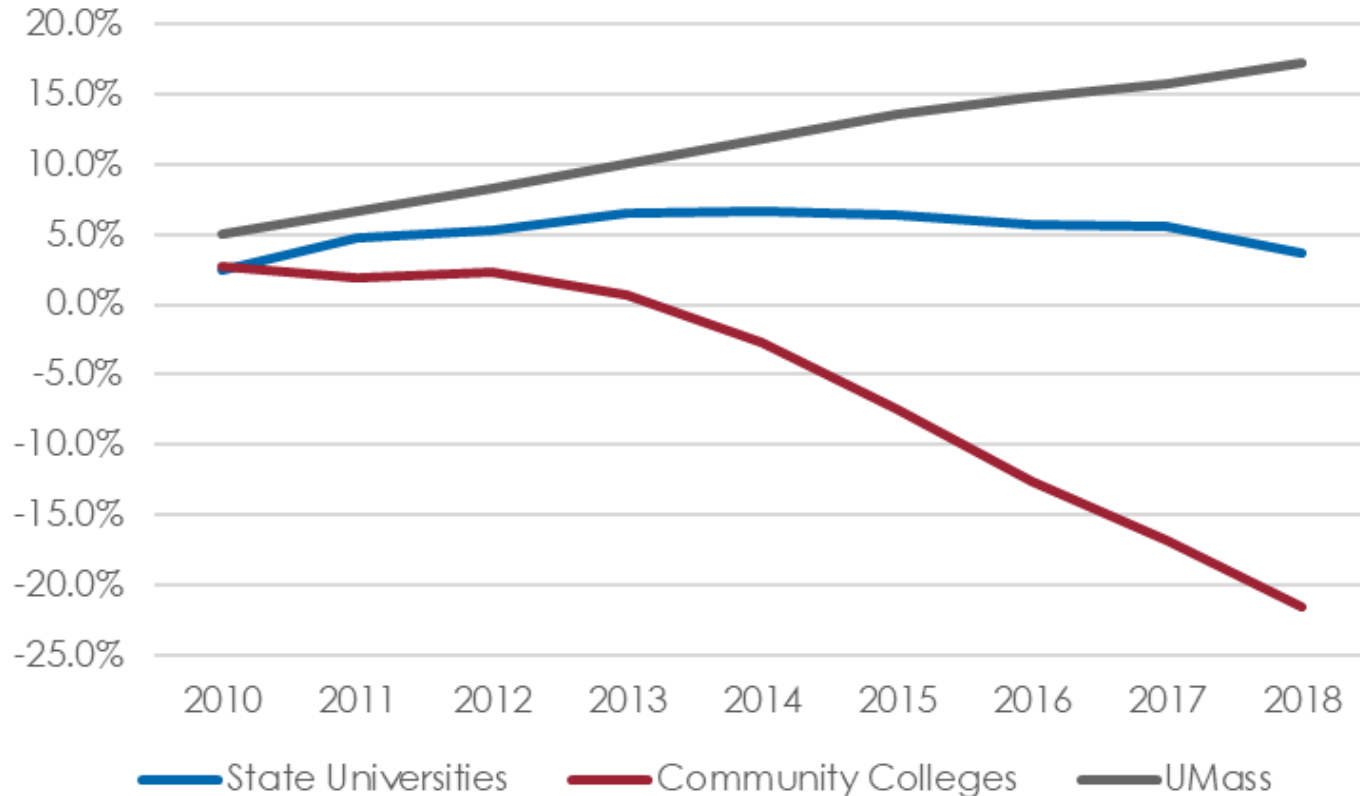


Students FTEs	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Amherst	24,277	24,932	26,328	26,637	26,747	27,008	27,098	27,696	28,340	28,712	29,051	29,808	30,213	30,641	31,063	31,361	31,605
Boston	10,442	11,156	11,442	11,791	12,001	12,333	12,833	13,195	13,101	13,036	13,213	13,241	13,247	13,254	13,262	13,270	13,278
Dartmouth	7,990	8,159	8,263	7,980	7,984	7,866	7,930	7,766	7,558	7,286	7,330	6,971	6,853	6,860	6,865	6,878	6,893
Lowell	9,413	10,373	11,361	11,867	12,490	13,025	13,369	13,620	13,910	14,422	14,601	14,791	15,005	15,230	15,462	15,701	15,937
Subtotal	52,122	54,620	57,394	58,275	59,222	60,232	61,230	62,277	62,909	63,456	64,195	64,810	65,318	65,985	66,652	67,211	67,713
% Growth	4.1%	4.8%	5.1%	1.5%	1.6%	1.7%	1.7%	1.7%	1.0%	0.9%	1.2%	0.3%	0.8%	1.0%	1.0%	0.8%	0.7%
Medical School	1,018	1,120	1,170	1,206	1,115	1,104	1,071	1,056	1,070	1,074	1,153	1,195	1,207	1,221	1,232	1,247	1,265
University	53,140	55,740	58,564	59,481	60,337	61,336	62,301	63,333	63,979	64,530	65,348	66,006	66,524	67,206	67,884	68,457	68,978
% Growth	4.1%	4.9%	5.1%	1.6%	1.4%	1.7%	1.6%	1.7%	1.0%	0.9%	1.3%	1.0%	0.8%	1.0%	1.0%	0.8%	0.8%

Source: Actuals from student profile.

State University, Community College, and UMass System Enrollments

Cumulative Percent Change 2010 - 2018



UMass:

Cumulative Percent Change: 17.2%
Average Annual Percent Change: 1.8%

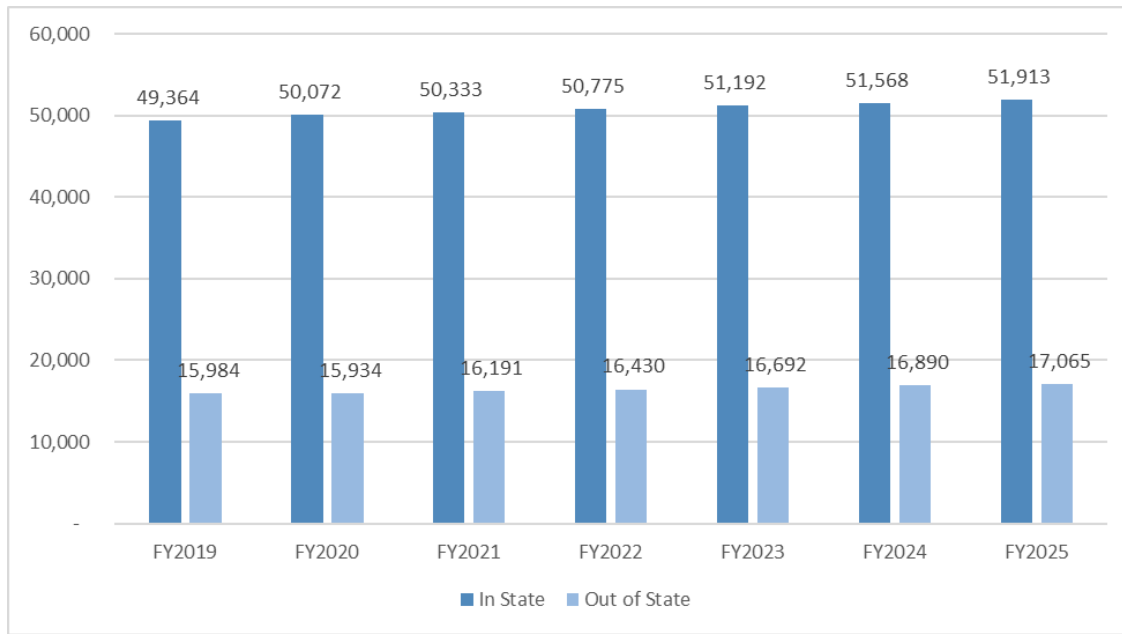
State Universities:

Cumulative Percent Change: 3.7%
Average Annual Percent Change: 0.4%

Community Colleges:

Cumulative Percent Change: -21.5%
Average Annual Percent Change: -2.6%

Revenue Sources: Enrollment by Residency



University	Actual				Forecast		
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Students (FTEs)							
In State	49,364	50,072	50,333	50,775	51,192	51,568	51,913
% Change	1.7%	1.4%	0.5%	0.9%	0.8%	0.7%	0.7%
Out of State	15,984	15,934	16,191	16,430	16,692	16,890	17,065
% Change	-0.2%	-0.3%	1.6%	1.5%	1.6%	1.2%	1.0%
Total	65,348	66,005	66,524	67,206	67,884	68,457	68,978
% Change	1.3%	1.0%	0.8%	1.0%	1.0%	0.8%	0.8%

Source: Actuals from student profile.

Amherst

Students (FTEs)	Actual				Forecast		
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
In State	20,016	20,743	20,973	21,222	21,429	21,585	21,709
% Change	1.0%	3.6%	1.1%	1.2%	1.0%	0.7%	0.6%
Out of State	9,034	9,065	9,240	9,419	9,633	9,776	9,896
% Change	1.7%	0.3%	1.9%	1.9%	2.3%	1.5%	1.2%
Total	29,051	29,808	30,213	30,641	31,063	31,361	31,605
% Change	1.2%	2.6%	1.4%	1.4%	1.4%	1.0%	0.8%

Boston

Students (FTEs)	Actual				Forecast		
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
In State	10,576	10,639	10,643	10,649	10,654	10,659	10,665
% Change	3.2%	0.6%	0.0%	0.0%	0.1%	0.1%	0.1%
Out of State	2,637	2,602	2,603	2,606	2,608	2,611	2,613
% Change	-5.4%	-1.3%	0.1%	0.1%	0.1%	0.1%	0.1%
Total	13,213	13,241	13,247	13,254	13,262	13,270	13,278
% Change	1.4%	0.2%	0.0%	0.1%	0.1%	0.1%	0.1%

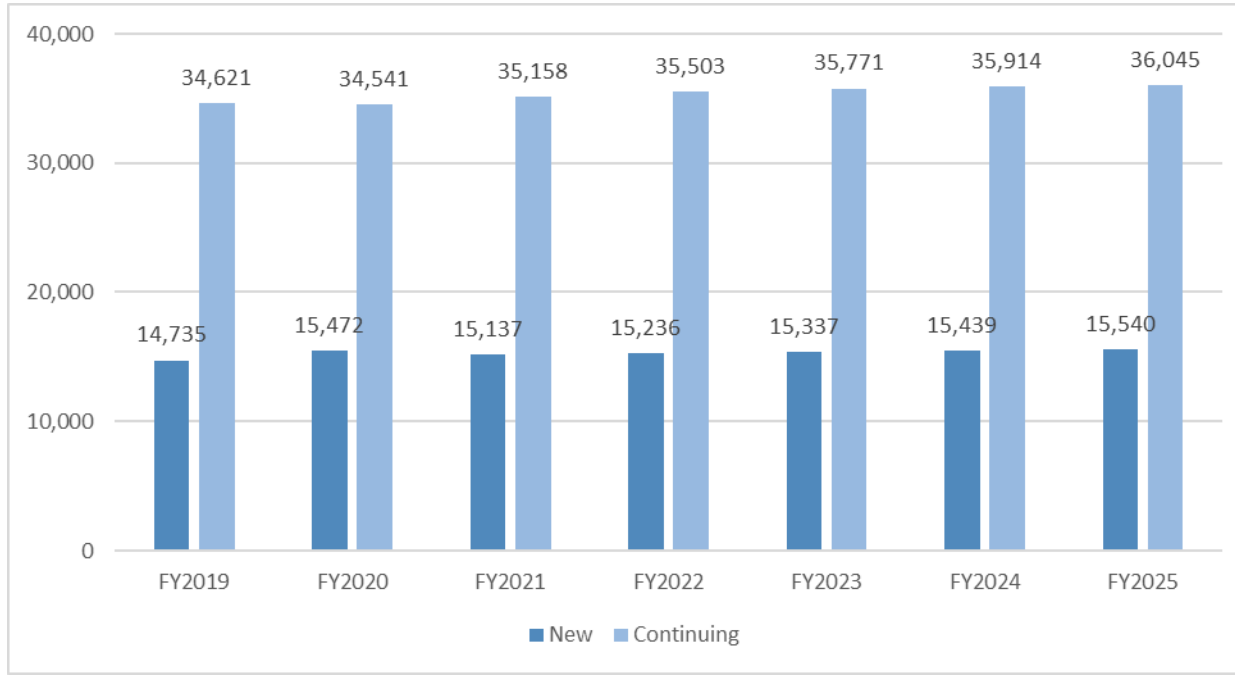
Dartmouth

Students (FTEs)	Actual				Forecast		
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
In State	6,191	5,820	5,663	5,665	5,672	5,680	5,690
% Change	-0.3%	-6.0%	-2.7%	0.0%	0.1%	0.1%	0.2%
Out of State	1,139	1,151	1,190	1,195	1,193	1,198	1,203
% Change	5.9%	1.1%	3.4%	0.4%	-0.2%	0.4%	0.4%
Total	7,330	6,971	6,853	6,860	6,865	6,878	6,893
% Change	0.6%	-4.9%	-1.7%	0.1%	0.1%	0.2%	0.2%

LOWELL

Students (FTEs)	Actual				Forecast		
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
In State	11,792	12,080	12,255	12,438	12,628	12,823	13,016
% Change	2.9%	2.4%	1.5%	1.5%	1.5%	1.5%	1.5%
Out of State	2,809	2,711	2,750	2,792	2,834	2,878	2,921
% Change	-5.0%	-3.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Total	14,601	14,790	15,005	15,230	15,462	15,701	15,937
% Change	1.2%	1.3%	1.5%	1.5%	1.5%	1.5%	1.5%

Revenue Sources: Enrollment by New vs Continuing



University	Actual		Forecast				
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Undergraduate (FTEs)							
New	14,735	15,472	15,137	15,236	15,337	15,439	15,540
% Change	7.5%	5.0%	-2.2%	0.7%	0.7%	0.7%	0.7%
Continuing	34,621	34,541	35,158	35,503	35,771	35,914	36,045
% Change	0.1%	-0.2%	1.8%	1.0%	0.8%	0.4%	0.4%
Undergraduate Total	49,356	50,013	50,295	50,739	51,108	51,352	51,585
% Change	2.2%	1.3%	0.6%	0.9%	0.7%	0.5%	0.5%

Source: Actuals from student profile.

Amherst	Actual		Forecast				
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Undergraduate (FTEs)							
New	6,535	7,284	6,884	6,934	6,984	7,034	7,084
% Change	5.7%	11.5%	-5.5%	0.7%	0.7%	0.7%	0.7%
Continuing	16,411	16,396	17,076	17,306	17,456	17,476	17,486
% Change	-0.3%	-0.1%	4.1%	1.3%	0.9%	0.1%	0.1%
Undergraduate Total	22,945	23,680	23,960	24,240	24,440	24,510	24,570
% Change	1.3%	3.2%	1.2%	1.2%	0.8%	0.3%	0.2%

Boston	Actual		Forecast				
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Undergraduate (FTEs)							
New	3,344	3,244	3,244	3,244	3,244	3,244	3,244
% Change	11.6%	-3.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Continuing	6,912	7,036	7,036	7,036	7,036	7,036	7,036
% Change	1.1%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Undergraduate Total	10,256	10,280	10,280	10,280	10,280	10,280	10,280
% Change	4.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%

Dartmouth	Actual		Forecast				
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Undergraduate (FTEs)							
New	1,833	1,721	1,739	1,739	1,739	1,739	1,739
% Change	11.3%	-6.1%	1.1%	0.0%	0.0%	0.0%	0.0%
Continuing	3,767	3,540	3,367	3,367	3,367	3,367	3,367
% Change	-4.3%	-6.0%	-4.9%	0.0%	0.0%	0.0%	0.0%
Undergraduate Total	5,600	5,261	5,106	5,106	5,106	5,106	5,106
% Change	0.3%	-6.1%	-2.9%	0.0%	0.0%	0.0%	0.0%

LOWELL	Actual		Forecast				
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Undergraduate (FTEs)							
New	3,029	3,223	3,270	3,319	3,370	3,422	3,473
% Change	5.0%	6.4%	1.5%	1.5%	1.5%	1.5%	1.5%
Continuing	7,526	7,569	7,679	7,794	7,913	8,035	8,156
% Change	2.3%	0.6%	1.5%	1.5%	1.5%	1.5%	1.5%
Undergraduate Total	10,555	10,792	10,949	11,113	11,282	11,457	11,629
% Change	3.1%	2.2%	1.5%	1.5%	1.5%	1.5%	1.5%

Revenue Sources: Enrollment by Career

University Students (FTEs)	Actual				Forecast		
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Undergraduate	49,356	50,014	50,294	50,738	51,107	51,352	51,584
% Change	2.2%	1.3%	0.6%	0.9%	0.7%	0.5%	0.5%
Graduate	9,036	9,000	9,115	9,256	9,395	9,538	9,634
% Change	-0.4%	-0.4%	1.3%	1.5%	1.5%	1.5%	1.0%
Continuing Ed	1,808	1,286	1,265	1,269	1,273	1,278	1,282
Online Only	4,949	5,460	5,574	5,659	5,820	5,988	6,161
% Change	-3.1%	-0.2%	1.4%	1.3%	2.4%	2.4%	2.4%
Law School	199	246	276	283	288	301	316
% Change	8.4%	23.6%	12.2%	2.5%	1.8%	4.5%	5.0%
Total	65,348	66,005	66,524	67,206	67,884	68,457	68,978
% Change	1.3%	1.0%	0.8%	1.0%	1.0%	0.8%	0.8%

Source: Actuals from student profile.

Amherst Students (FTEs)	Actual				Forecast		
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Undergraduate	22,945	23,680	23,960	24,240	24,440	24,510	24,570
% Change	1.3%	3.2%	1.2%	1.2%	0.8%	0.3%	0.2%
Graduate	3,772	3,736	3,861	3,961	4,061	4,161	4,211
% Change	1.7%	-0.9%	3.3%	2.6%	2.5%	2.5%	1.2%
Continuing Ed	417	313	313	313	313	313	313
Online Only	1,917	2,079	2,079	2,127	2,249	2,377	2,511
% Change	-1.1%	2.5%	0.0%	2.0%	5.0%	5.0%	5.0%
Total	29,051	29,808	30,213	30,641	31,063	31,361	31,605
% Change	1.2%	2.6%	1.4%	1.4%	1.4%	1.0%	0.8%

Boston Students (FTEs)	Actual				Forecast		
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Undergraduate	10,256	10,280	10,280	10,280	10,280	10,280	10,280
% Change	4.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Graduate	1,714	1,771	1,771	1,771	1,771	1,771	1,771
% Change	-4.9%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Continuing Ed	715	419	419	419	419	419	419
Online Only	528	769	777	784	792	800	808
% Change	-11.2%	-4.4%	0.6%	0.6%	0.7%	0.7%	0.7%
Total	13,213	13,241	13,247	13,254	13,262	13,270	13,278
% Change	1.4%	0.2%	0.0%	0.1%	0.1%	0.1%	0.1%

Dartmouth Students (FTEs)	Actual				Forecast		
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Undergraduate	5,600	5,261	5,105	5,105	5,105	5,105	5,105
% Change	0.3%	-6.1%	-3.0%	0.0%	0.0%	0.0%	0.0%
Graduate	594	536	490	490	490	490	490
% Change	-14.9%	-9.8%	-8.6%	0.0%	0.0%	0.0%	0.0%
Continuing Ed	391	279	255	255	255	255	255
Online Only	546	649	727	727	727	727	727
% Change	13.9%	-1.0%	5.8%	0.0%	0.0%	0.0%	0.0%
Law School	199	246	276	283	288	301	316
% Change	8.4%	23.6%	12.2%	2.5%	1.8%	4.5%	5.0%
Total	7,330	6,971	6,853	6,860	6,865	6,878	6,893
% Change	0.6%	-4.9%	-1.7%	0.1%	0.1%	0.2%	0.2%

LOWELL Students (FTEs)	Actual				Forecast		
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Undergraduate	10,555	10,792	10,949	11,113	11,282	11,457	11,629
% Change	3.1%	2.2%	1.5%	1.5%	1.5%	1.5%	1.5%
Graduate	1,804	1,761	1,787	1,814	1,841	1,870	1,898
% Change	0.6%	-2.4%	1.4%	1.5%	1.5%	1.5%	1.5%
Continuing Ed	285	274	278	282	286	291	295
Online Only	1,957	1,963	1,991	2,021	2,052	2,084	2,115
% Change	-6.2%	-0.2%	1.4%	1.5%	1.5%	1.5%	1.5%
Total	14,601	14,790	15,005	15,230	15,462	15,701	15,937
% Change	1.2%	1.3%	1.5%	1.5%	1.5%	1.5%	1.5%

Revenue Sources: Tuition Assumptions

- Undergraduate*:
 - In State:
 - All campuses reflect 2.5% increase
 - Out of State:
 - 3% Amherst, Dartmouth
 - 2.5% Boston
 - 2% Lowell
- Graduate*:
 - 3% Amherst, Boston, Dartmouth
 - 2% Lowell

Breakdown of Increase	Forecast					% Change FY21-25	
	FY21	FY22	FY23	FY24	FY25	Cumulative	Avg. Annual
<i>\$ in Thousands</i>							
Undergrad: In State (Gross)	14,297	14,767	15,269	15,797	16,327	14.2%	3.4%
<i>Undergrad: In State (Net)</i>	<i>10,679</i>	<i>10,964</i>	<i>11,255</i>	<i>11,639</i>	<i>12,024</i>	<i>12.6%</i>	<i>3.0%</i>
Undergrad: Out State (Gross)	7,271	7,548	7,849	8,160	8,404	15.6%	3.7%
<i>Undergrad: Out State (Net)</i>	<i>5,333</i>	<i>5,461</i>	<i>5,612</i>	<i>5,762</i>	<i>5,884</i>	<i>10.3%</i>	<i>2.5%</i>
Graduate (Gross)	5,003	4,774	4,923	5,059	5,276	5.4%	1.4%
<i>Graduate (Net)</i>	<i>3,077</i>	<i>2,815</i>	<i>2,942</i>	<i>2,912</i>	<i>3,021</i>	<i>-1.8%</i>	<i>-0.3%</i>
Enrollment	11,318	12,954	14,793	12,830	12,170	7.5%	2.6%
Total (Gross)	37,889	40,042	42,833	41,845	42,177	11.3%	2.8%

*Annually over the forecast period

Revenue Sources: Online

Online Revenue <i>\$ in Thousands</i>	Actual					Budget	Q1 Projection	Forecast				
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Amherst	36,120	38,563	42,042	45,352	46,144	47,265	47,067	48,008	50,067	55,451	61,390	67,917
% Growth	3.1%	6.8%	9.0%	7.9%	1.7%	2.4%	2.0%	1.6%	4.3%	10.8%	10.7%	10.6%
Boston	17,020	18,041	19,416	19,717	19,461	19,152	20,828	21,036	21,247	21,459	21,674	21,890
% Growth	2.2%	6.0%	7.6%	1.6%	-1.3%	-1.6%	7.0%	9.8%	1.0%	1.0%	1.0%	1.0%
Dartmouth(1)	5,760	6,734	8,026	9,635	11,213	12,335	12,616	13,660	14,070	14,493	14,927	15,374
% Growth	26.4%	16.9%	19.2%	20.0%	16.4%	10.0%	12.5%	10.7%	3.0%	3.0%	3.0%	3.0%
Lowell (2)	30,590	32,587	35,291	38,380	39,237	43,000	43,000	45,150	47,407	49,778	52,266	54,880
% Growth	6.4%	6.5%	8.3%	8.8%	2.2%	9.6%	9.6%	5.0%	5.0%	5.0%	5.0%	5.0%
University	89,579	96,028	104,852	113,169	116,126	121,752	123,511	127,855	132,791	141,181	150,257	160,061
% Growth	5.3%	7.2%	9.2%	7.9%	2.6%	4.8%	6.4%	5.0%	3.9%	6.3%	6.4%	6.5%

Source: FY15 -19 Provided by UMass Online; may differ from campus reported.

(1) UMass Online does not include revenue from the Dartmouth Office Of Continuing Education technology fee.

(2) UMass Online reports summer session revenue differently than Lowell financial reporting.

- Online revenue reflects the current programming through UMass Online.
- Annual increases assume both enrollment and expanded course offering growth.
- Revenue does not reflect the future state of UMass Online that is currently being studied.

Expenses

Expenses: Modeling Assumptions

President's Office Guidance

Collective Bargaining	2.0%
Fringe Rate	37.12%-43.69%
Payroll Tax	2.60%-3.27%
Interest on new borrowing	5.0%

Campus Specific

Staffing

Ratio Assumptions

by FY23

Operating Margin	Maintain at or above 2%
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▪ Salaries & Fringe:

- Total collective bargaining increases of 2.0% or \$30-33 million annually.
- State funding for collective bargaining of \$12-13 million annually.
- Annual fringe rate increase of 4.4% based on historical average.

▪ **Staffing:** Consistent with enrollment, research opportunities and other programmatic needs.

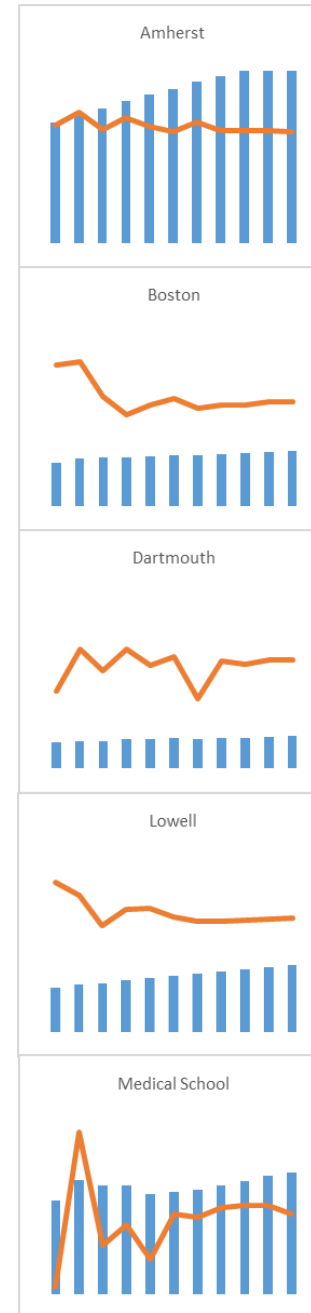
▪ **Capital & Debt:** Reflects borrowing required to fully implement the current capital plan; Amherst built in planning amount for projects not yet approved

▪ **Financial Aid:** Increases consistent with tuition increase and to meet student need.

University Expenses: Annual Changes



Excludes impact of GASB 68 & 75



University Expenses: by Expense Category

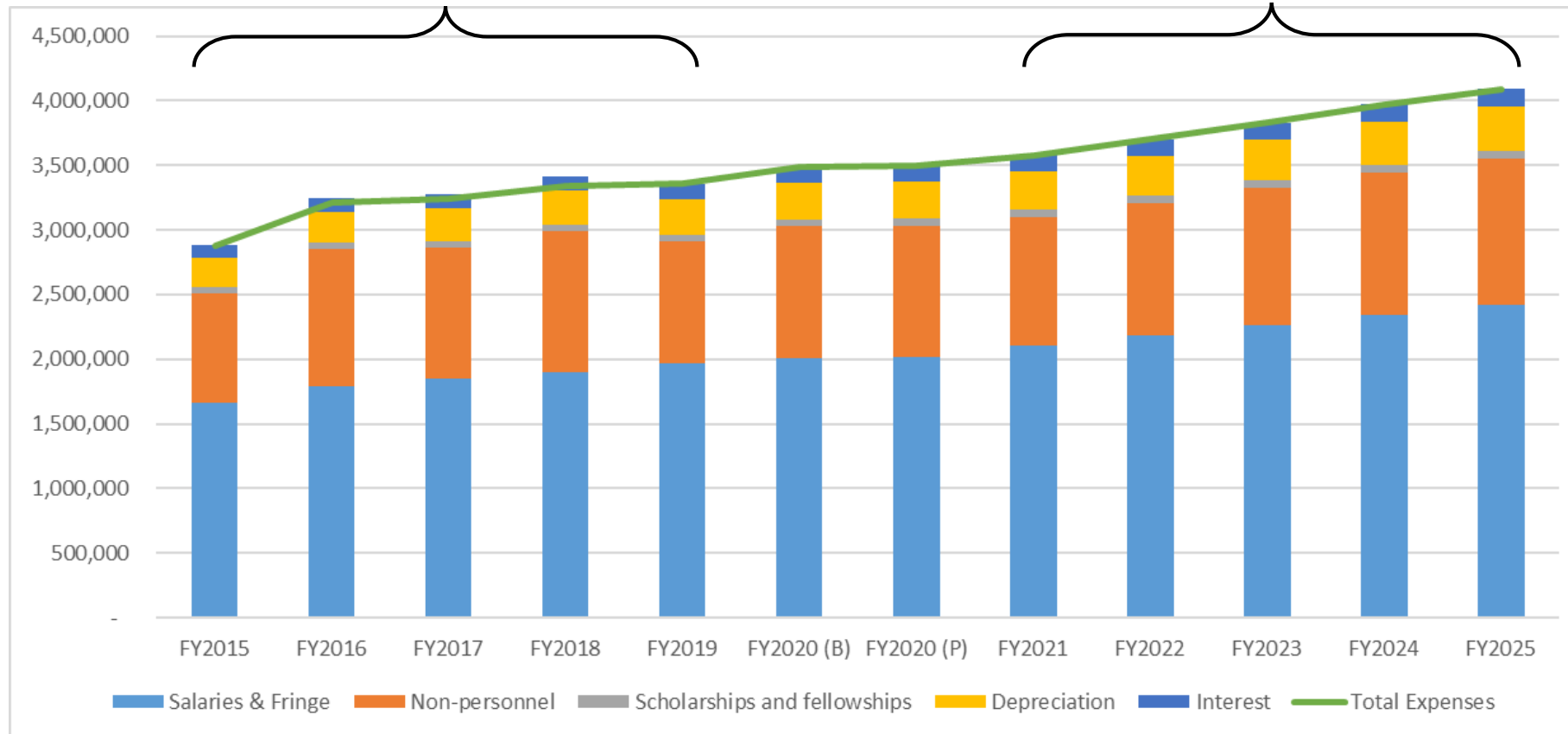
\$ in Thousands	Actual					Budget	Q1 Projection	Forecast					Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
Salaries & Fringe	1,659,054	1,788,018	1,847,346	1,901,896	1,970,869	2,011,769	2,018,601	2,109,281	2,184,193	2,263,414	2,345,706	2,423,434	314,153	
<i>Salaries & Fringe Growth</i>		7.8%	3.3%	3.0%	3.6%	2.1%	2.4%	4.8%	3.6%	3.6%	3.6%	3.3%	14.9%	3.5%
Non-personnel	852,900	1,067,226	1,018,600	1,088,019	943,685	1,013,968	1,015,870	990,945	1,024,201	1,061,045	1,099,025	1,126,143	135,198	
<i>Non-personnel Growth</i>		25.1%	-4.6%	6.8%	-13.3%	7.4%	7.6%	-2.3%	3.4%	3.6%	3.6%	2.5%	13.6%	3.3%
Scholarships and fellowships	49,300	44,645	47,706	50,402	49,507	52,996	53,990	55,088	56,348	57,579	58,896	60,207	5,119	
<i>Scholarships & fellowships Growth</i>		-9.4%	6.9%	5.7%	-1.8%	7.0%	9.1%	3.9%	2.3%	2.2%	2.3%	2.2%	9.3%	2.2%
Depreciation	221,043	240,864	249,669	261,417	276,638	286,093	287,345	295,573	306,317	318,498	332,277	339,966	44,393	
<i>Depreciation Growth</i>		9.0%	3.7%	4.7%	5.8%	3.4%	3.9%	3.3%	3.6%	4.0%	4.3%	2.3%	15.0%	3.6%
Interest	100,332	105,276	110,069	115,851	116,217	119,112	118,876	129,992	131,071	131,014	134,017	142,197	12,204	
<i>Interest Growth</i>		4.9%	4.6%	5.3%	0.3%	2.5%	2.3%	9.1%	0.8%	0.0%	2.3%	6.1%	9.4%	2.3%
Total	2,882,686	3,211,563	3,237,351	3,336,260	3,356,916	3,483,937	3,494,682	3,580,879	3,702,131	3,831,550	3,969,922	4,091,946	511,067	
<i>Total Growth</i>		11.4%	0.8%	3.1%	0.6%	3.8%	4.1%	2.8%	3.4%	3.5%	3.6%	3.1%	14.3%	3.4%

Excludes impact of GASB 68 & 75

University Expenses: Expense Drivers

Average Annual Growth FY15-19:
\$118.6 million or 4.0%

Average Annual Growth FY21-25:
\$127.8 million or 3.4%



Excludes impact of GASB 68 & 75

Expenses: by Campus

\$ in Thousands	Actual					Budget	Q1 Projection	Forecast					Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
Amherst	1,056,072	1,128,807	1,173,095	1,241,490	1,296,841	1,340,857	1,357,814	1,409,183	1,460,887	1,515,480	1,570,622	1,625,886	216,703	
<i>Amherst Growth</i>		6.9%	3.9%	5.8%	4.5%	3.4%	4.7%	5.1%	3.7%	3.7%	3.6%	3.5%	15.4%	3.6%
Boston	377,435	411,912	424,463	424,202	430,967	442,523	445,647	446,838	454,134	461,406	471,156	480,972	34,134	
<i>Boston Growth</i>		9.1%	3.0%	-0.1%	1.6%	2.7%	3.4%	1.0%	1.6%	1.6%	2.1%	2.1%	7.6%	1.9%
Dartmouth	225,308	236,213	238,763	250,270	255,118	263,887	256,226	253,729	260,745	266,193	273,902	281,792	28,063	
<i>Dartmouth Growth</i>		4.8%	1.1%	4.8%	1.9%	3.4%	0.4%	-3.8%	2.8%	2.1%	2.9%	2.9%	11.1%	2.7%
Lowell	387,313	417,850	428,306	451,552	476,652	495,813	494,798	511,975	528,755	547,539	567,688	589,358	77,383	
<i>Lowell Growth</i>		7.9%	2.5%	5.4%	5.6%	4.0%	3.8%	3.3%	3.3%	3.6%	3.7%	3.8%	15.1%	3.6%
President's Office	97,339	104,744	108,938	106,776	111,963	129,844	130,713	134,498	136,661	139,150	141,688	144,276	9,778	
<i>President's Office Growth</i>		7.6%	4.0%	-2.0%	4.9%	16.0%	16.7%	3.6%	1.6%	1.8%	1.8%	1.8%	7.3%	1.8%
Subtotal	2,143,467	2,299,526	2,373,565	2,474,290	2,571,540	2,672,924	2,685,197	2,756,222	2,841,182	2,929,768	3,025,056	3,122,283	366,061	
<i>Subtotal Growth</i>		6.8%	3.1%	4.1%	3.8%	3.8%	0.5%	3.0%	3.0%	3.0%	3.1%	3.1%	13.3%	3.1%
Medical School	811,896	987,866	942,132	943,144	867,033	889,903	889,903	906,684	944,616	987,123	1,031,914	1,058,451	151,767	
<i>Medical School Growth</i>		21.7%	-4.6%	0.1%	-8.1%	2.6%	2.6%	1.9%	4.2%	4.5%	4.5%	2.6%	16.7%	3.9%
Total	2,882,686	3,211,563	3,237,351	3,336,260	3,356,916	3,483,937	3,494,682	3,580,879	3,702,131	3,831,550	3,969,922	4,091,946	511,067	
<i>Total Growth</i>		11.4%	0.8%	3.1%	0.6%	3.8%	4.1%	2.8%	3.4%	3.5%	3.6%	3.1%	14.3%	3.4%

Expenses: by Program Area

\$ in Thousands	Actual					Budget	Q1 Projection	Forecast					Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
E&G (ABDL)	1,546,676	1,613,294	1,708,158	1,760,614	1,741,494	1,833,207	1,835,051	1,887,831	1,949,802	2,014,974	2,087,625	2,156,529	268,698	
<i>E&G Growth</i>		4.3%	5.9%	3.1%	-1.1%	5.3%	5.4%	3.0%	3.3%	3.3%	3.6%	3.3%	14.2%	3.4%
Research (ABDL)	211,109	230,981	235,562	245,931	262,553	266,642	269,004	274,064	280,924	287,882	295,684	304,879	30,815	
<i>Research Growth</i>		9.4%	2.0%	4.4%	6.8%	1.6%	2.5%	2.8%	2.5%	2.5%	2.7%	3.1%	11.2%	2.7%
Auxiliary (ABDL)	274,770	330,577	334,935	362,365	380,865	385,751	392,240	400,460	411,923	423,645	434,044	448,012	47,553	
<i>Auxiliary Growth</i>		20.3%	1.3%	8.2%	5.1%	1.3%	3.0%	3.8%	2.9%	2.8%	2.5%	3.2%	11.9%	2.8%
Other (Med)	568,199	757,329	677,349	764,882	696,475	697,020	695,058	717,521	750,616	788,166	827,155	848,210	130,690	
<i>Other Growth</i>		33.3%	-10.6%	12.9%	-8.9%	0.1%	-0.2%	2.9%	4.6%	5.0%	4.9%	2.5%	18.2%	4.3%
Law School	8,092	7,820	7,728	7,788	7,780	8,359	10,370	11,388	12,024	12,636	13,572	14,688	3,300	
<i>Law School Growth</i>		-3.4%	-1.2%	0.8%	-0.1%	7.4%	33.3%	36.2%	5.6%	5.1%	7.4%	8.2%	29.0%	6.6%
Independent Business Lines (Med)	346,517	347,392	361,099	275,890	267,607	292,958	292,958	289,615	296,840	304,247	311,843	319,628	30,013	
<i>Independent Business Lines Growth</i>		0.3%	3.9%	-23.6%	-3.0%	9.5%	9.5%	-1.1%	2.5%	2.5%	2.5%	2.5%	10.4%	2.5%
Total	2,882,686	3,211,563	3,237,351	3,336,260	3,356,916	3,483,937	3,494,682	3,580,879	3,702,131	3,831,550	3,969,922	4,091,946	511,067	
<i>Total Growth</i>		11.4%	0.8%	3.1%	0.6%	3.8%	4.1%	2.8%	3.4%	3.5%	3.6%	3.1%	14.3%	3.4%

Expense Drivers: Salaries & Fringe

Average Annual Growth FY15-19:

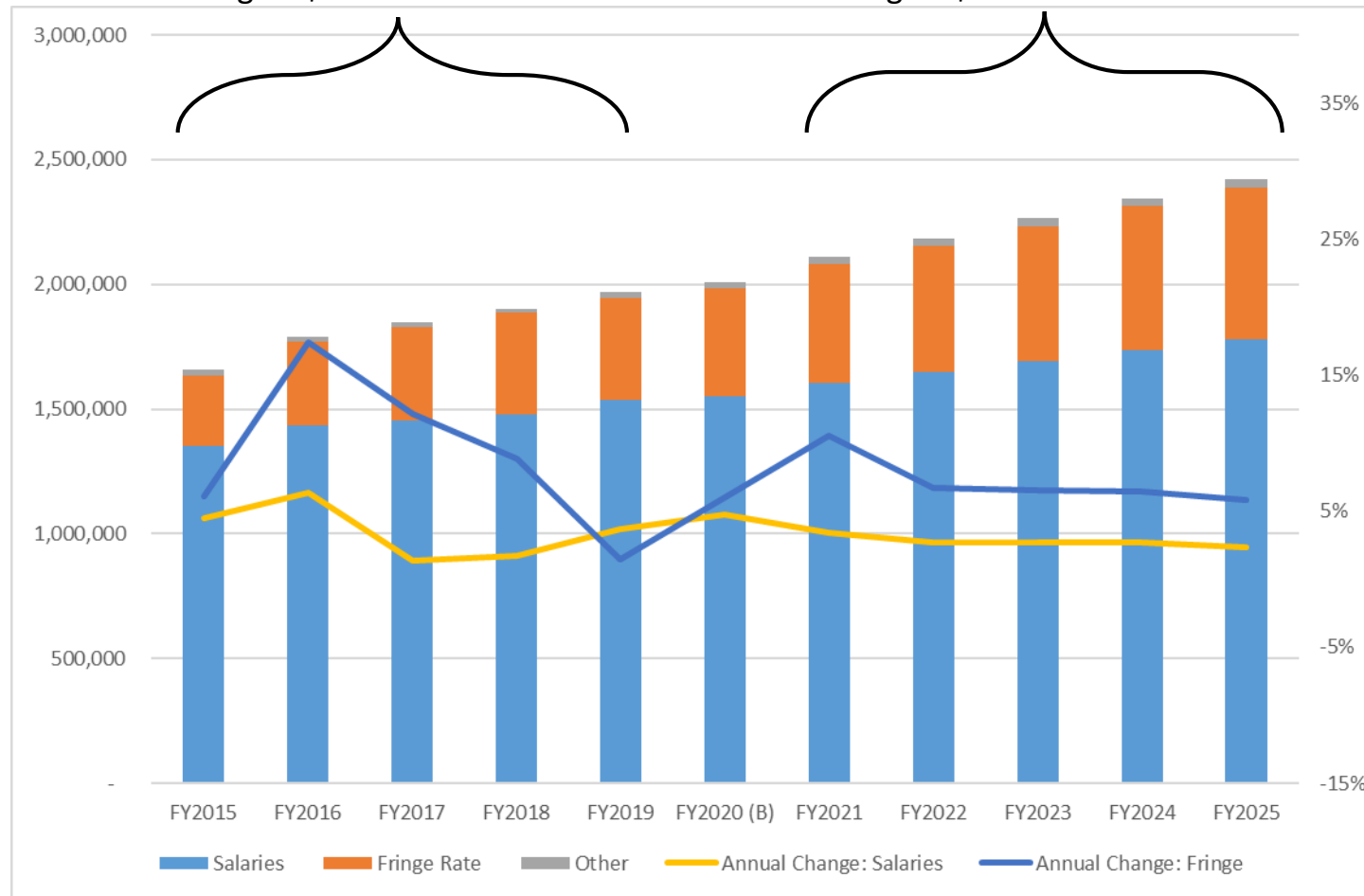
Salaries = \$46.3 million or 3%

Fringe = \$32.1 million or 10%

Average Annual Growth FY21-25:

Salaries = \$43.4 million or 2.6%

Fringe = \$33.3 million or 6.4%



Expense Drivers: Collective Bargaining Parameters & Cost

<i>\$ in Thousands</i>	Actual			Forecast				
	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
<i>Assumption</i>	2%	2%	2%	2%	2%	2%	2%	2%
State Funded								
Annual	11,297	11,631	11,811	12,018	12,227	12,439	12,654	12,872
Cumulative		22,928	34,739		24,245	36,684	49,339	62,211
University Funded								
Annual	19,212	19,488	20,175	18,445	18,846	19,254	20,017	19,758
Cumulative		38,701	58,875		37,290	56,545	76,562	96,320
Total								
Annual	30,509	31,120	31,986	30,463	31,072	31,694	32,672	32,630
Cumulative		61,629	93,614		61,535	93,229	125,901	158,531

- New contract period begins FY21-FY23
- Administration (through the Office of Employee Relations) establishes “parameters” – in the form of salary increase percentages.
- Salaries are recurring, the cumulative impact must be funded in future budgets.
- The cost for **State Funded Payroll** = \$12 – 12.9 million annually.

Expense Drivers: Staffing

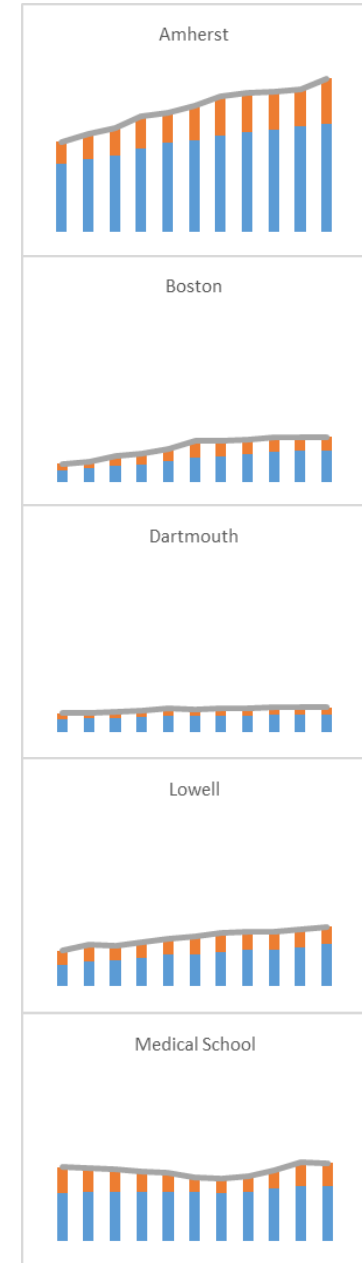
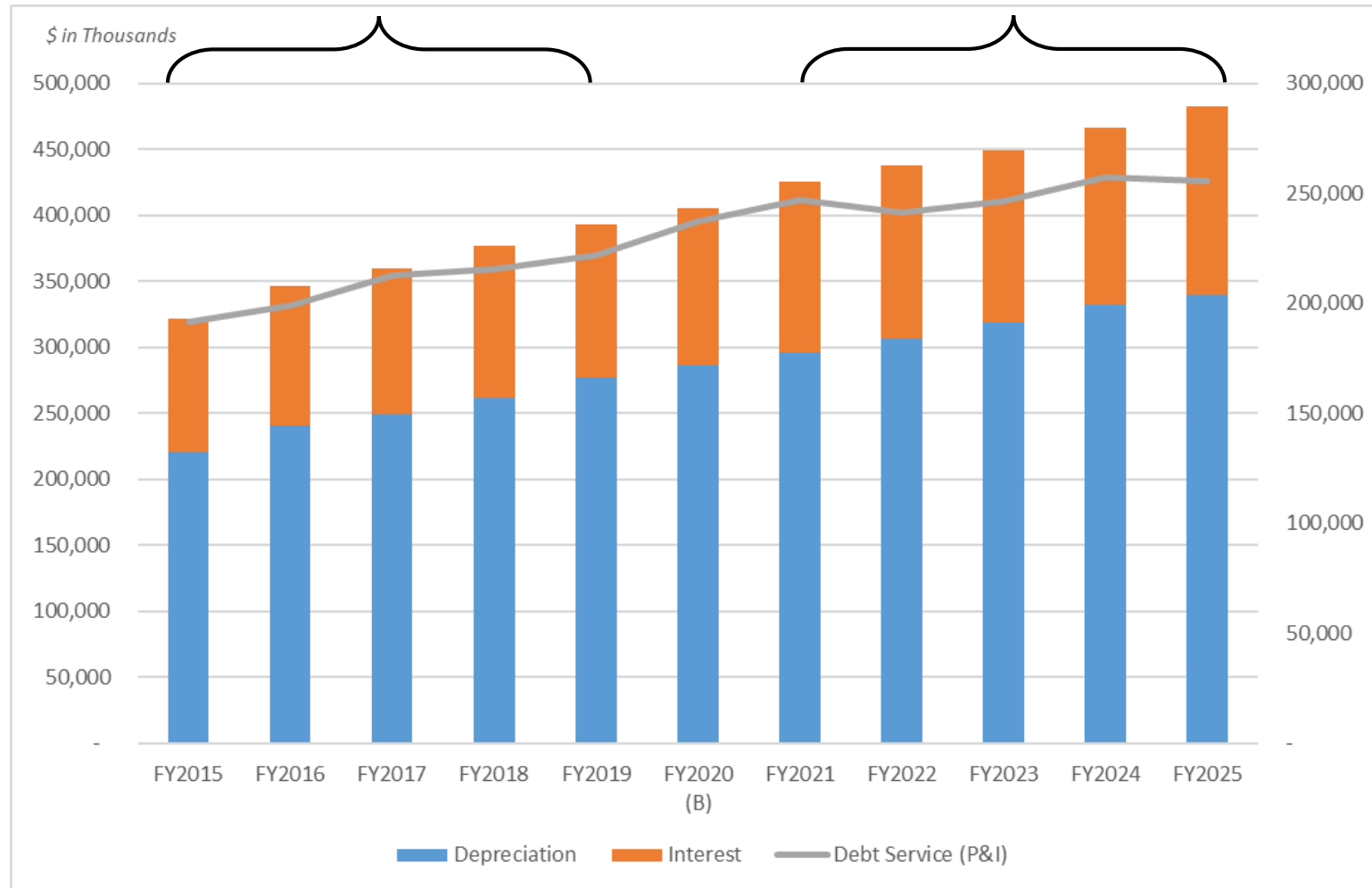
UNIVERSITY

Employee FTEs	Actual			Budget	Actual	Forecast				
	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Restricted										
Faculty	272	320	319	319	314	313	320	329	338	346
Staff	1,349	1,615	1,618	1,662	1,610	1,658	1,684	1,715	1,745	1,774
Total Restricted	1,621	1,935	1,936	1,981	1,924	1,971	2,004	2,044	2,083	2,120
<i>FTE Change (#)</i>		313	2	44	(12)	(9)	32	40	38	37
Unrestricted General University Ops										
Faculty	3,759	3,813	3,776	3,893	4,003	3,985	3,999	4,022	4,073	4,106
Staff	6,487	6,521	6,638	6,568	6,594	6,704	6,734	6,751	6,793	6,826
Total General University Ops	10,246	10,334	10,414	10,462	10,597	10,689	10,733	10,773	10,866	10,932
<i>FTE Change (#)</i>		88	80	48	183	228	44	40	94	66
Unrestricted Aux./Independent Business										
Faculty	18	13	11	13	13	13	13	13	13	13
Staff	2,549	2,516	2,765	2,913	2,984	2,990	2,992	2,995	2,997	2,998
Total Aux./Independent Business	2,567	2,529	2,776	2,926	2,997	3,003	3,005	3,008	3,010	3,011
<i>FTE Change (#)</i>		(38)	247	150	222	77	2	3	2	1
Total Faculty & Staff	14,434	14,798	15,126	15,667	15,518	15,966	16,050	16,139	16,279	16,388
		2.5%	2.2%	3.6%	2.6%	1.9%	0.5%	0.6%	0.9%	0.7%

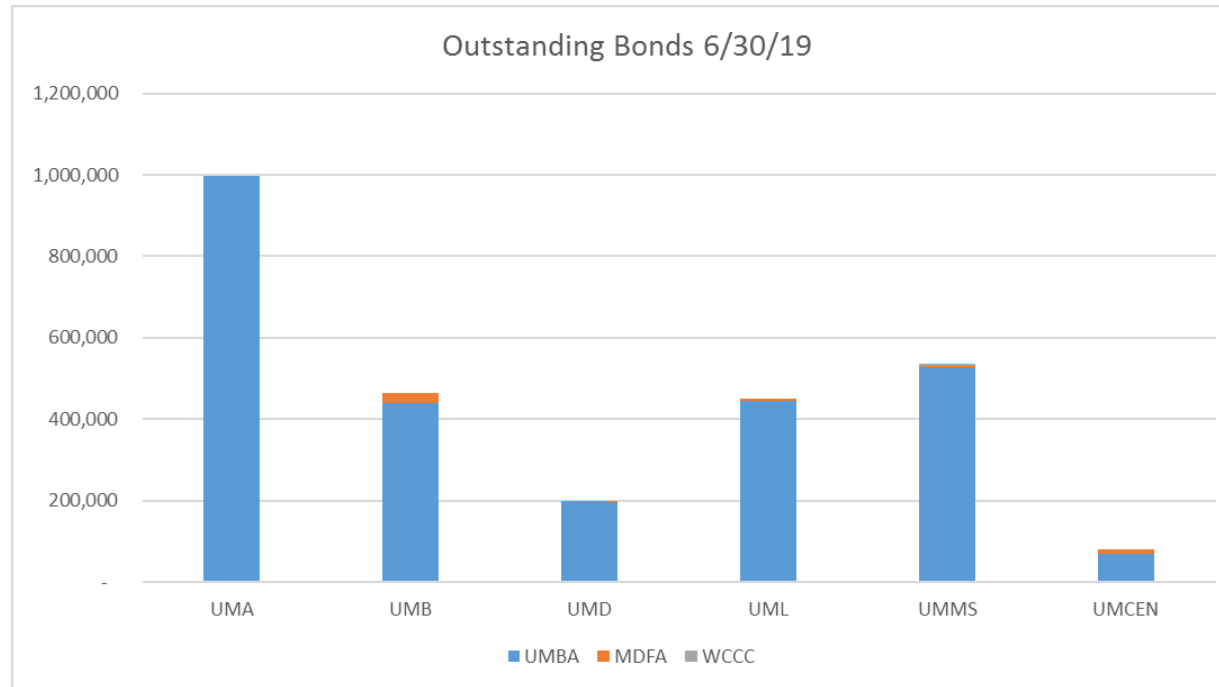
Expense Drivers: Depreciation & Interest

Average Annual Growth FY15-19:
\$17.9 million or 5.2%

Average Annual Growth FY21-25:
\$24.3 million or 5.6%



Expense Drivers: Estimated Debt & Impact of New Borrowing / Refunding



(\$ in Thousands)	Actual					Budget	Forecast				
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Existing Bond Principal w/ New Issuance*	2,947,427	2,855,312	2,925,461	2,868,795	2,722,340	2,618,409	2,511,499	2,411,193	2,306,592	2,197,467	2,101,176
Existing Debt Service	191,411	198,763	212,389	215,419	221,213	237,099	217,886	206,361	207,070	207,669	189,916
New Issuance Debt Service						3,337	12,259	12,259	12,259	12,405	15,040
Refunding Savings*							(3,835)	(2,023)	(2,028)	(1,358)	(1,110)
Total Debt Service						240,436	226,310	216,597	217,301	218,716	203,845

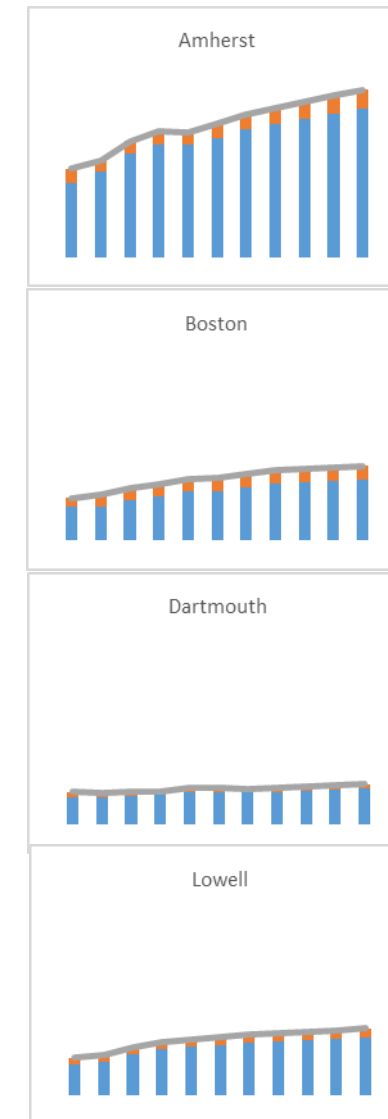
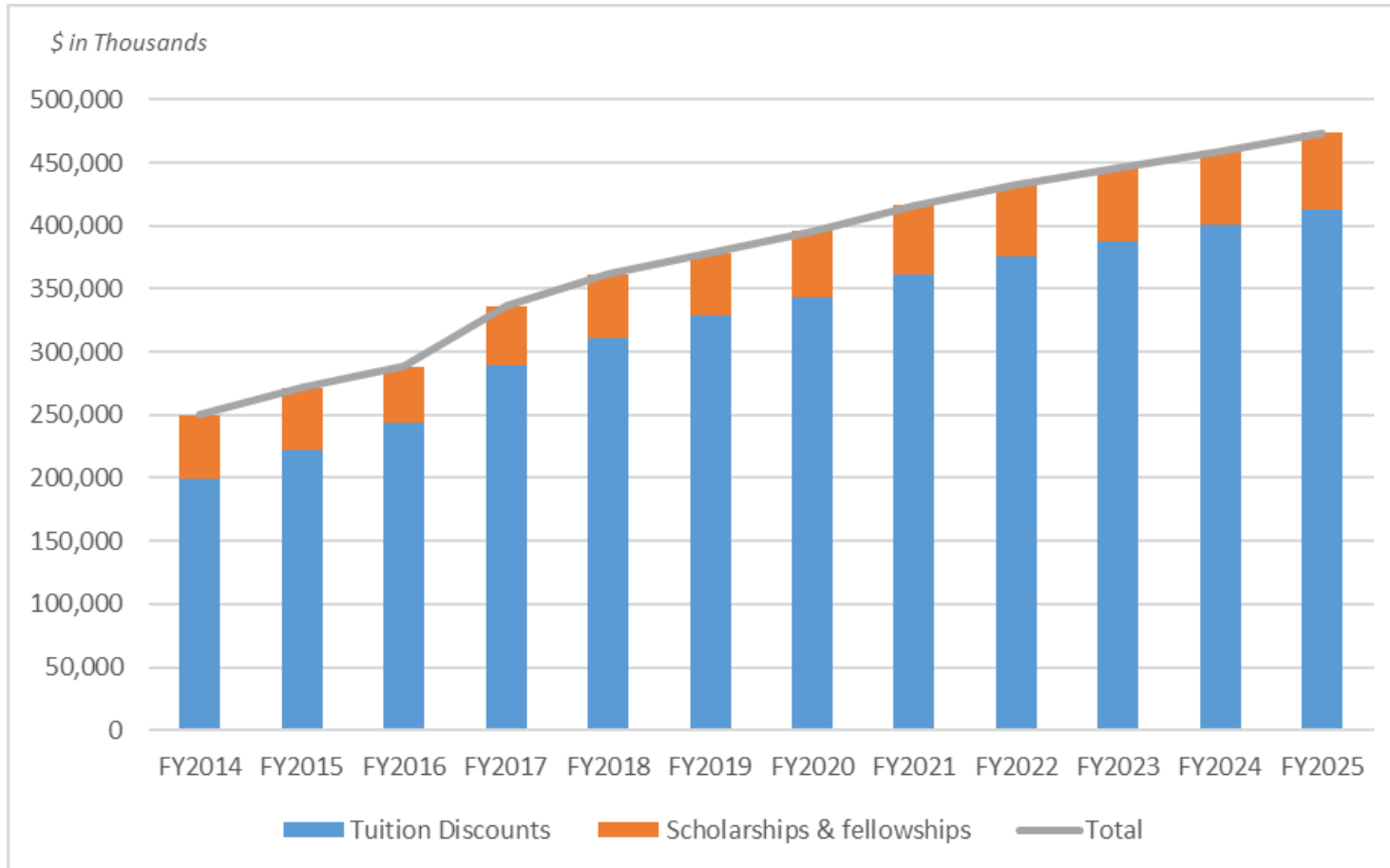
*Estimated debt service based on rates as of 11/7/19 and current expectations for new borrowing in January 2020

Expense Drivers: Financial Aid

<i>\$ in Thousands</i>	Actual					Budget	Forecast					Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
Tuition Discounts	222,164	244,025	288,708	311,947	328,830	342,748	360,961	376,071	387,908	400,549	413,262	52,301	3.4%
<i>Discount Rate</i>	22.5%	22.8%	25.4%	26.3%	26.9%	27.1%	27.6%	27.6%	27.4%	27.3%	27.2%	-0.4%	27.4%
Scholarships & Fellowships	49,300	44,645	47,706	50,402	49,507	52,996	55,088	56,348	57,579	58,896	60,207	5,119	2.2%
Total	271,464	288,670	336,414	362,349	378,337	395,744	416,049	432,419	445,487	459,445	473,469	57,421	3.3%
Amherst	119,476	129,333	156,819	169,040	168,209	180,968	193,037	201,200	209,284	217,593	225,521	32,484	4.0%
<i>Discount Rate</i>	22.5%	23.9%	27.2%	27.8%	26.9%	27.8%	27.9%	27.9%	27.7%	27.7%	27.6%	-1.1%	0.0%
Boston	56,565	61,518	69,981	74,970	82,819	83,106	89,072	94,183	95,949	97,767	99,641	10,569	2.9%
<i>Discount Rate</i>	20.7%	19.6%	22.4%	23.7%	26.4%	26.6%	28.0%	29.3%	29.4%	29.4%	29.4%	5.1%	1.2%
Dartmouth	43,206	40,988	43,000	43,818	48,064	48,244	47,739	48,940	50,261	51,657	53,137	5,398	2.7%
<i>Discount Rate</i>	33.1%	32.0%	33.1%	33.2%	35.2%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	0.0%	0.0%
Lowell	50,151	54,551	63,833	71,201	75,010	78,661	81,303	83,109	85,005	87,365	90,031	8,728	2.6%
<i>Discount Rate</i>	19.8%	20.3%	22.4%	23.9%	25.2%	24.7%	25.4%	25.0%	24.6%	24.4%	24.2%	-4.7%	-1.2%
Medical School	2,060	2,269	2,751	3,320	4,235	4,764	4,898	4,986	4,989	5,063	5,139	241	1.2%
Total	271,464	288,670	336,414	362,349	378,337	395,744	416,049	432,419	445,487	459,445	473,469	57,421	3.3%

- Increases in support of need and merit based aid funded by campus resources.

Expense Drivers: University Financial Aid



Ratios

Key Financial Ratios Defined

Operating cash flow margin – Measures net income (before non-cash expenses) relative to operating revenue to support investments

$$\frac{(\text{Total revenues} - \text{total expenses}) + \text{depreciation} + \text{interest}}{\text{Total revenues}}$$

Operating margin – Indicates the excess margin (or deficit) by which annual revenues cover annual expenses (excluding unrealized gains or losses)

$$\frac{\text{Total revenues} - \text{total expenses}}{\text{Total revenues}}$$

Debt burden – Compares the relative cost of borrowing to overall expenditures

$$\frac{\text{Debt service (P\&I)}}{\text{Total expenses}}$$

Debt service coverage – Measures the ability to make debt service payments from annual operations

$$\frac{(\text{Total revenues} - \text{total expenses}) + \text{depreciation} + \text{interest}}{\text{Debt service (P\&I)}}$$

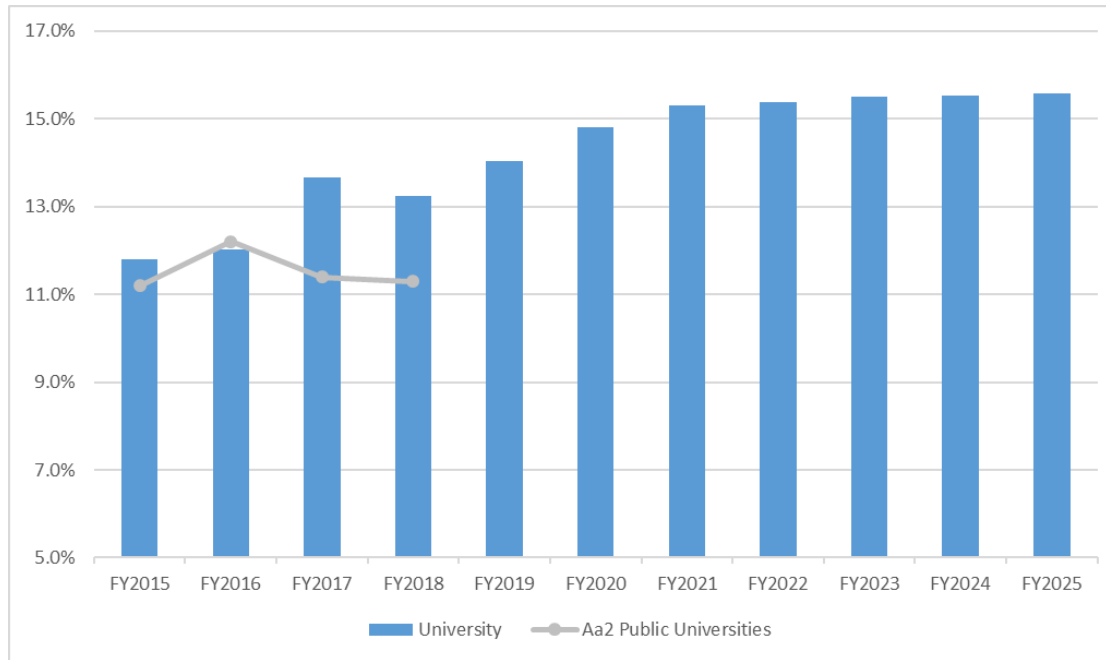
Spendable Cash & Investments to expenses – Measures the extent to which the University can rely on wealth that can be accessed over time or for a specific purpose to operate

$$\frac{(\text{Cash \& investments} - \text{debt service reserve funds} + \text{permanently restricted pledges receivable} - \text{permanently restricted Net Assets})}{\text{Total expenses}}$$

Financial Leverage Ratio – Measures the ability to repay bondholders from wealth that can be accessed over time or for a specific purpose

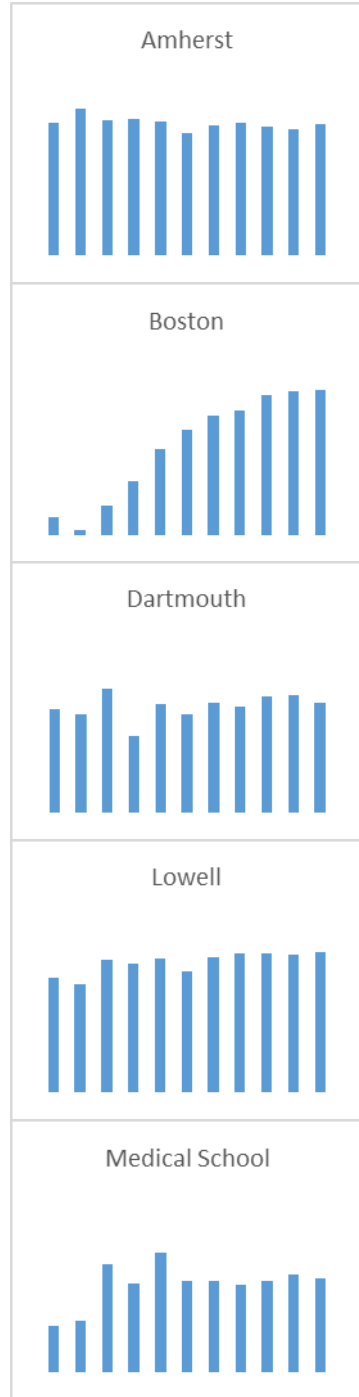
$$\frac{\text{Spendable Cash \& Investments}}{\text{Total Debt}}$$

Operating Cash Flow Margin

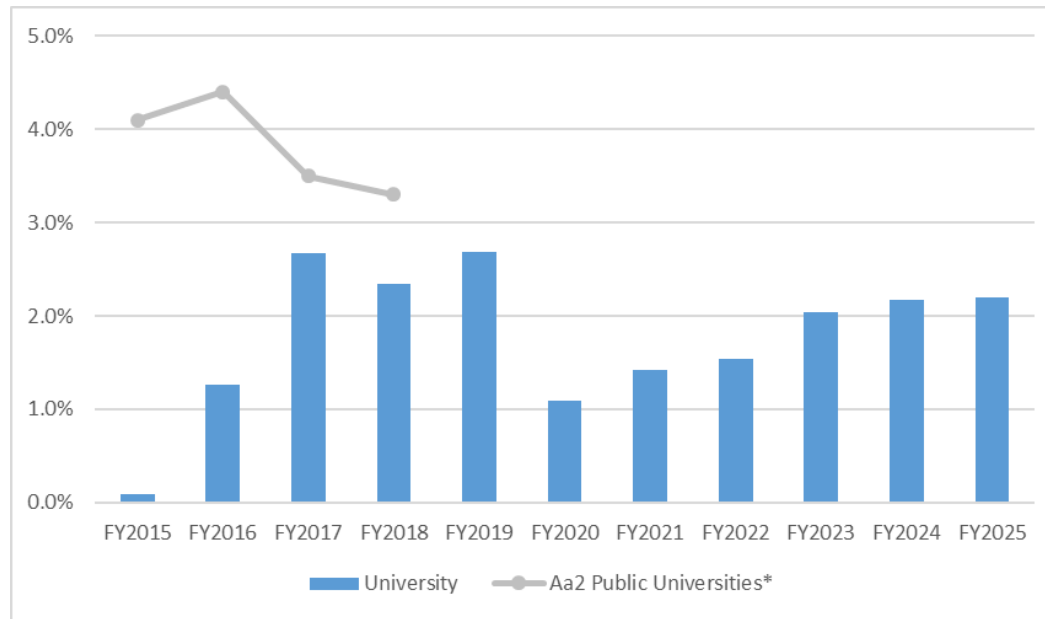


	Actual					Budget FY2020	Forecast				
	FY2015	FY2016	FY2017	FY2018	FY2019		FY2021	FY2022	FY2023	FY2024	FY2025
Amherst	14.6%	15.6%	14.8%	14.8%	14.6%	13.8%	14.3%	14.5%	14.3%	14.1%	14.5%
Boston	6.4%	5.4%	7.1%	9.0%	11.2%	12.6%	13.7%	14.1%	15.1%	15.5%	15.6%
Dartmouth	12.5%	12.1%	13.9%	10.6%	12.8%	12.2%	12.9%	12.7%	13.4%	13.5%	12.9%
Lowell	13.3%	12.8%	14.6%	14.3%	14.7%	13.7%	14.7%	15.0%	15.0%	15.0%	15.1%
Medical	8.4%	8.7%	12.8%	11.5%	13.7%	11.6%	11.6%	11.4%	11.6%	12.1%	11.8%
Central	14.6%	17.0%	17.7%	17.5%	12.0%	7.0%	6.5%	6.9%	6.8%	7.0%	7.0%
University	11.8%	12.0%	13.7%	13.3%	14.0%	14.8%	15.3%	15.4%	15.5%	15.5%	15.6%

Excludes impact of GASB 68 & 75



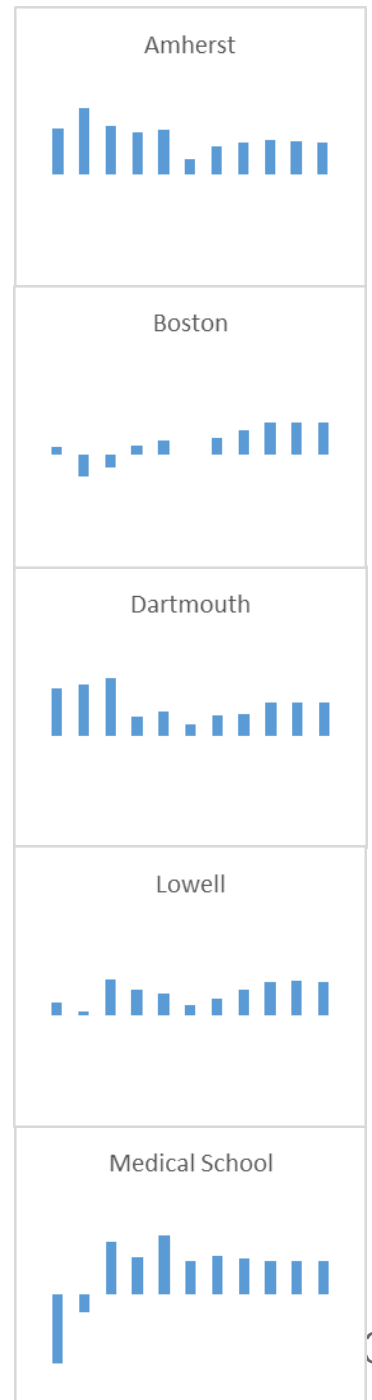
Operating Margin



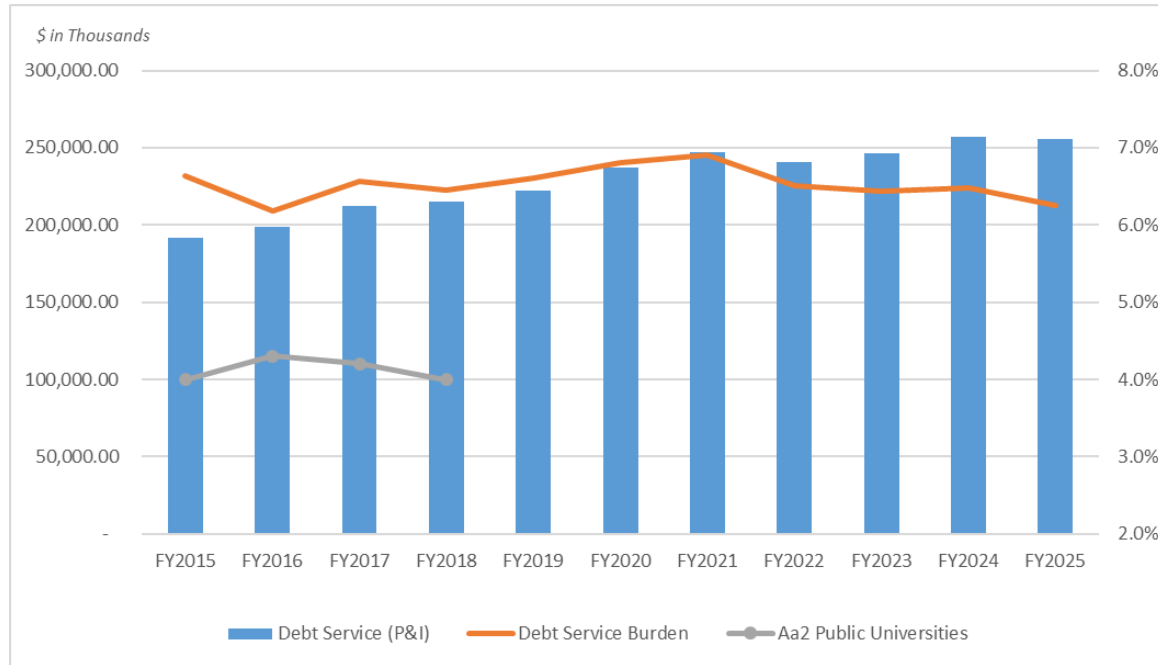
*Moody's OM calculation which uses normalized investment income

	Actual					Budget	Forecast				
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Amherst	2.8%	4.1%	3.0%	2.6%	2.7%	1.0%	1.7%	2.0%	2.1%	2.0%	2.0%
Boston	0.5%	-1.3%	-0.7%	0.6%	0.9%	0.0%	1.0%	1.5%	2.0%	2.0%	2.0%
Dartmouth	2.8%	3.1%	3.4%	1.1%	1.4%	0.7%	1.2%	1.2%	2.0%	2.0%	2.0%
Lowell	0.8%	0.2%	2.2%	1.5%	1.3%	0.6%	1.0%	1.5%	2.0%	2.0%	2.0%
Medical	-4.2%	-1.1%	3.2%	2.2%	3.5%	2.0%	2.3%	2.1%	2.0%	2.0%	2.0%
Central	-1.5%	0.7%	6.4%	10.4%	8.9%	2.0%	1.8%	2.0%	2.0%	2.0%	2.0%
University	0.1%	1.3%	2.7%	2.3%	2.7%	1.1%	1.7%	1.9%	2.1%	2.0%	2.0%

Excludes impact of GASB 68 & 75



Debt Service Burden



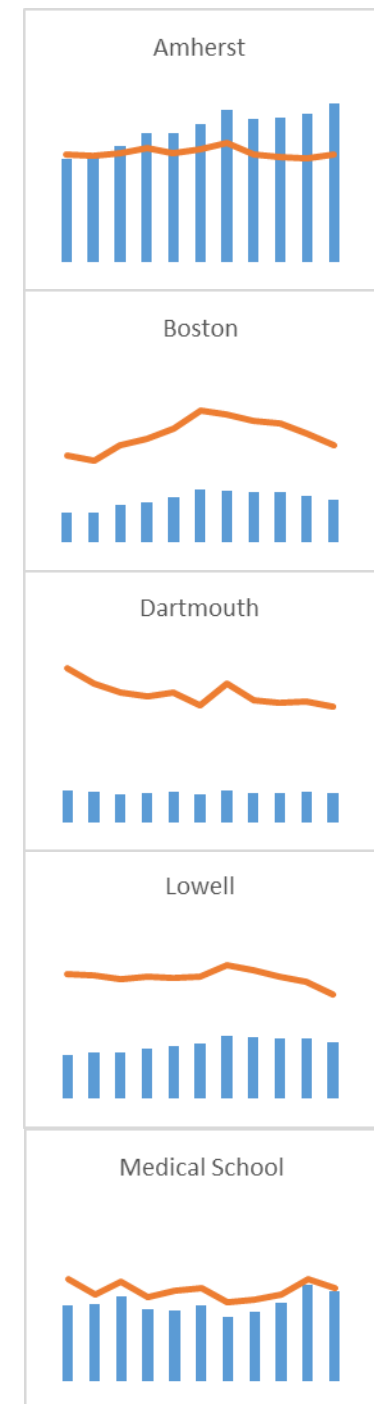
	Actual					Budget	Forecast				
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Amherst	6.4%	6.4%	6.6%	6.8%	6.5%	6.8%	7.2%	6.5%	6.3%	6.3%	6.5%
Boston	5.2%	4.9%	5.9%	6.3%	6.9%	7.9%	7.8%	7.4%	7.2%	6.6%	5.9%
Dartmouth*	9.3%	8.4%	7.8%	7.6%	7.8%	7.0%	8.4%	7.4%	7.2%	7.3%	7.0%
Lowell+	7.6%	7.5%	7.3%	7.4%	7.3%	7.5%	8.2%	7.8%	7.4%	7.1%	6.4%
Medical**	6.2%	5.2%	6.0%	5.1%	5.5%	5.6%	4.7%	4.9%	5.2%	6.2%	5.7%
Central	3.1%	3.7%	3.4%	2.8%	4.5%	3.9%	3.9%	3.9%	4.1%	2.7%	3.7%
University	6.6%	6.2%	6.6%	6.5%	6.6%	6.8%	6.9%	6.5%	6.4%	6.5%	6.2%

Excludes impact of GASB 68 & 75; excludes potential 2020 refunding; UMA: includes new borrowing in FY21 & FY24

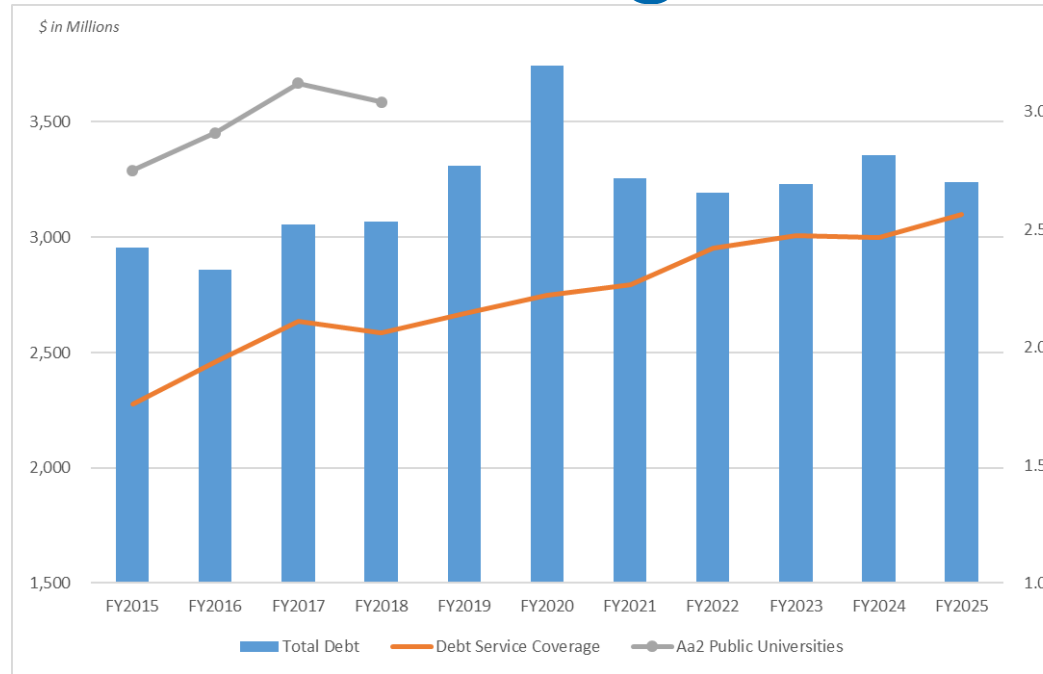
*Assumes full year of debt service for SENG borrowing in FY21; will be adjusted based on final structure of new issuance.

+Assumes level debt service for 2020 borrowing starting in FY21; will be adjusted based on final debt structure.

**Reflects \$215M of borrowing for the new research building in FY23; the ratios will be 5.4%, 6.8%, and 6.1% in FY23, FY24, and FY25 respectively for \$300M of borrowing.



Debt Service Coverage

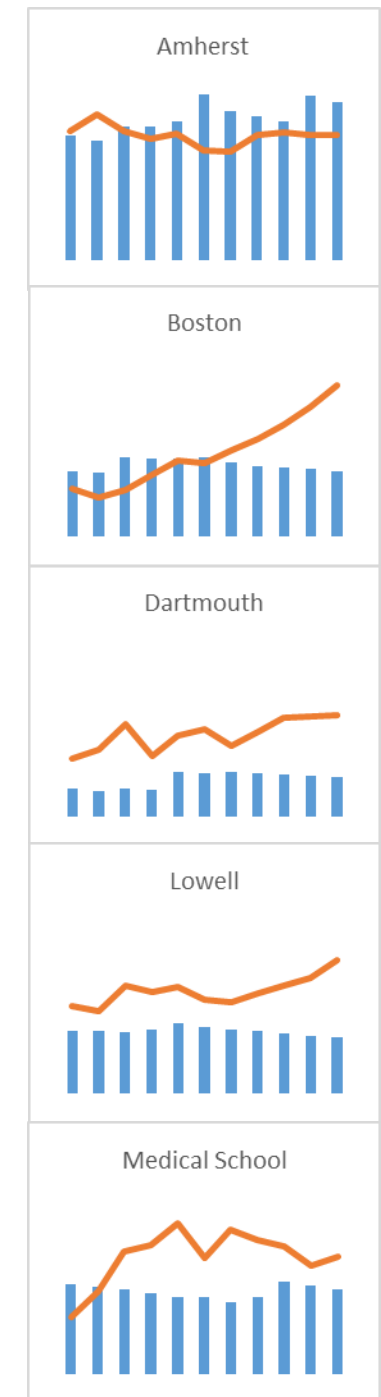


	Actual					Budget	Forecast				
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Amherst	2.3	2.5	2.3	2.2	2.3	2.0	2.0	2.2	2.3	2.3	2.3
Boston	1.2	1.0	1.1	1.4	1.6	1.5	1.7	1.9	2.1	2.3	2.6
Dartmouth	1.3	1.4	1.8	1.3	1.6	1.7	1.5	1.7	1.8	1.8	1.8
Lowell	1.7	1.7	2.0	1.9	2.0	1.8	1.8	1.9	2.0	2.1	2.4
Medical	1.3	1.7	2.2	2.3	2.6	2.1	2.5	2.4	2.3	2.0	2.1
Central	4.7	4.6	5.6	7.0	2.8	1.9	1.7	1.8	1.7	2.7	1.9
University	1.8	1.9	2.1	2.1	2.1	2.2	2.3	2.4	2.5	2.5	2.6

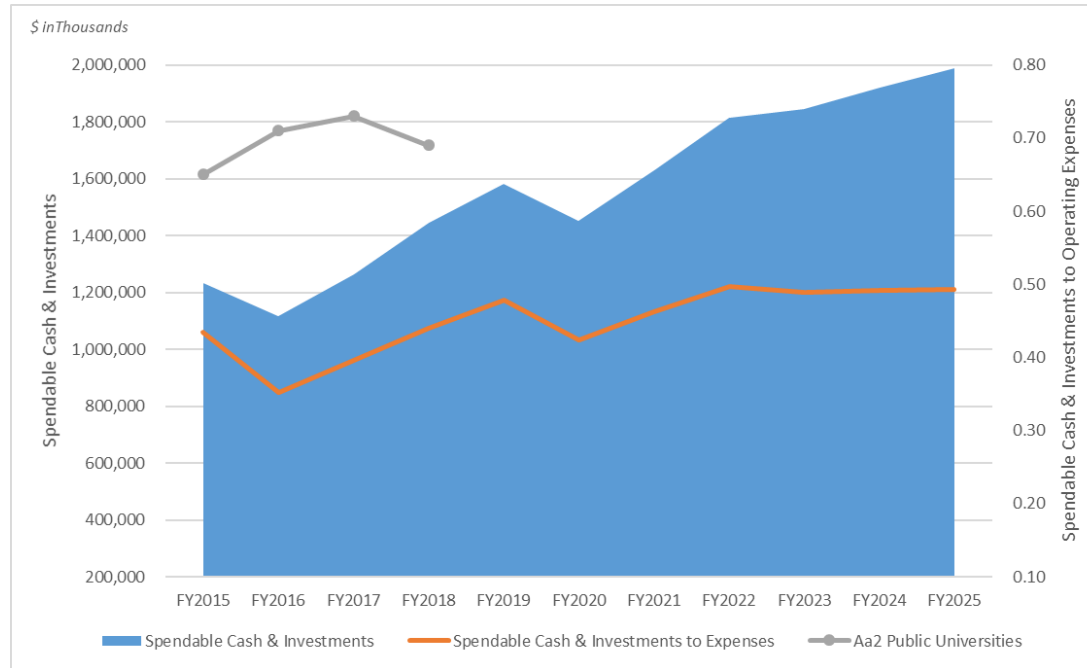
Excludes impact of GASB 68 & 75; excludes potential 2020 refunding

UMA: includes new borrowing in FY21 & FY24, total debt does not include P3 financing in FY21-FY25 pending decision on deal structure

UMMS: includes new borrowing in FY22 & FY23

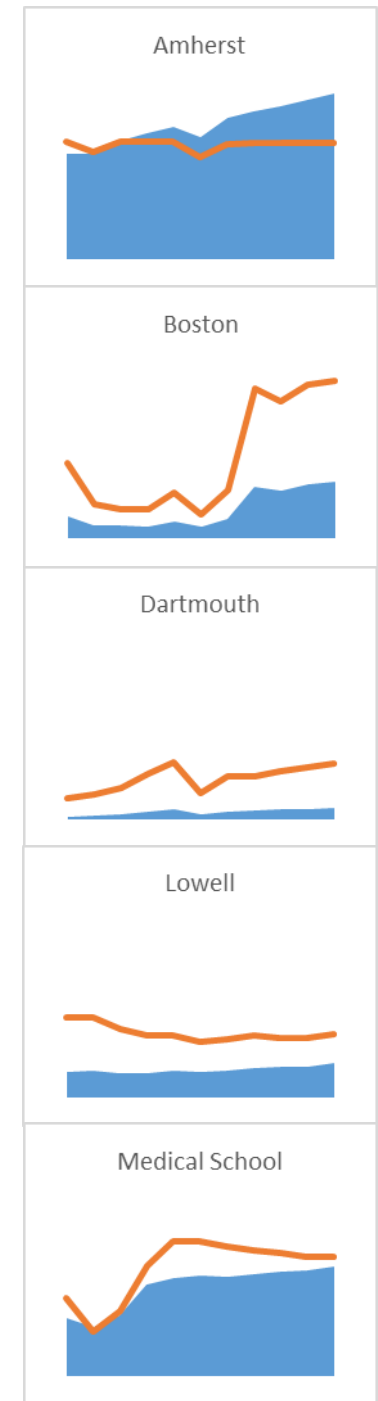


Spendable Cash & Investments

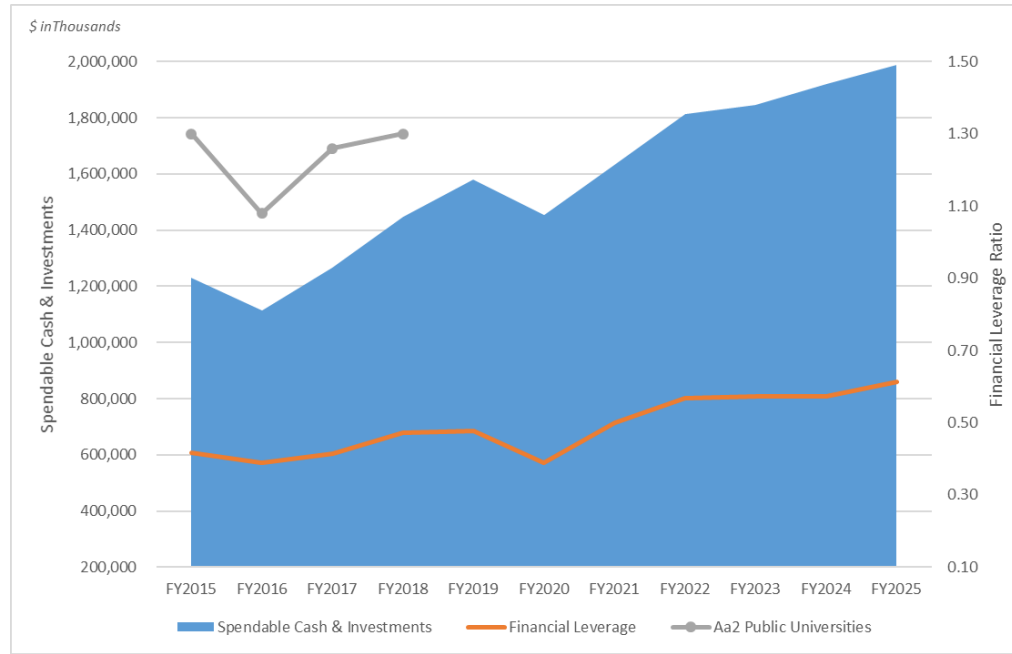


	Actual					Budget	Forecast				
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Amherst	0.46	0.42	0.46	0.46	0.46	0.41	0.45	0.45	0.45	0.45	0.45
Boston	0.33	0.20	0.19	0.19	0.24	0.17	0.25	0.55	0.51	0.56	0.58
Dartmouth	0.16	0.17	0.20	0.24	0.27	0.18	0.23	0.23	0.24	0.26	0.27
Lowell	0.34	0.34	0.31	0.29	0.29	0.27	0.28	0.29	0.28	0.28	0.29
Medical	0.33	0.23	0.30	0.43	0.50	0.50	0.49	0.48	0.47	0.46	0.46
Central	1.83	1.44	1.74	1.95	2.10	1.64	1.78	1.77	1.76	1.74	1.73
University	0.43	0.35	0.40	0.44	0.48	0.42	0.46	0.50	0.49	0.49	0.49

Excludes impact of GASB 68 & 75
 UMB: Includes campus estimate of \$192.5M in FY22 for Bayside Expo



Financial Leverage

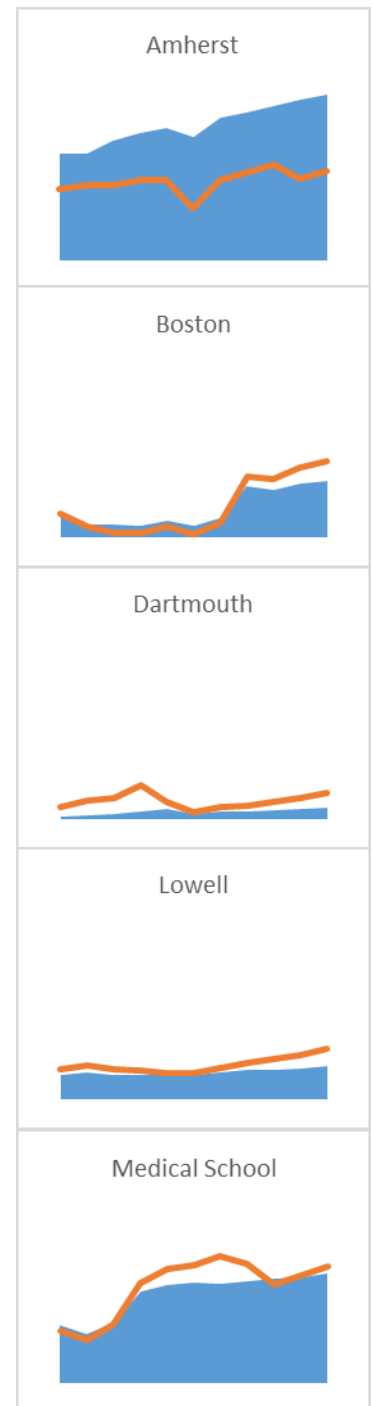


	Actual					Budget	Forecast				
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Amherst	0.46	0.48	0.48	0.49	0.54	0.38	0.53	0.57	0.62	0.54	0.58
Boston	0.22	0.15	0.12	0.12	0.16	0.12	0.18	0.43	0.42	0.48	0.52
Dartmouth	0.16	0.20	0.21	0.28	0.19	0.14	0.16	0.17	0.19	0.22	0.24
Lowell	0.25	0.27	0.25	0.24	0.24	0.25	0.27	0.30	0.32	0.34	0.38
Medical	0.38	0.34	0.42	0.64	0.72	0.74	0.79	0.75	0.64	0.68	0.73
Central	2.13	1.95	2.35	2.46	2.72	2.64	3.21	3.34	3.48	3.54	3.69
University	0.42	0.39	0.41	0.47	0.48	0.39	0.50	0.57	0.57	0.57	0.61

Excludes impact of GASB 68 & 75; excludes potential 2020 refunding

UMA: includes new borrowing in FY21 & FY24, total debt does not include P3 financing in FY21-FY25 pending decision on deal structure

UMMS: includes new borrowing in FY22 & FY23



Graduation Rates

4 Year Graduation Rate

%	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Amherst	67.0%	67.0%	70.5%	73.7%	76.3%	77.1%	77.0%	77.4%	77.5%	77.5%	77.5%
Boston	18.0%	20.9%	25.2%	24.5%	25.5%	25.5%	25.5%	25.5%	25.5%	25.5%	25.5%
Dartmouth	28.0%	30.2%	37.2%	37.1%	34.3%	32.0%	33.0%	30.0%	30.0%	32.0%	33.0%
Lowell (1)	32.2%	38.5%	37.7%	40.5%	44.2%	46.3%					

6 Year Graduation Rate

%	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Amherst	76.0%	78.0%	76.5%	77.4%	80.2%	82.1%	83.0%	83.0%	82.0%	83.0%	83.0%
Boston	42.0%	42.0%	45.0%	47.9%	48.0%	48.0%	48.0%	48.0%	48.0%	48.0%	48.0%
Dartmouth	47.0%	46.0%	48.8%	48.5%	56.3%	57.0%	50.0%	51.0%	51.0%	51.0%	51.0%
Lowell (1)	54.0%	56.0%	56.1%	60.1%	63.0%	66.1%	60.0%	60.0%	60.0%	60.0%	60.0%

Source: FY15-18 Student Profile; FY19-25 Campus

(1) Lowell: Does not include a 4-year rate; 6 year - 60% is the 2020 Strategic Plan goal for fall 2020 (FY21). Intent would be to maintain or improve on goal in the future

Retention Rates

First-Year Retention Rate											
%	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Amherst	90.0%	91.0%	91.3%	90.6%	90.7%	91.0%	91.0%	91.0%	91.0%	91.0%	91.0%
Boston	80.0%	78.0%	79.4%	77.5%	76.5%	76.5%	76.5%	76.5%	76.5%	76.5%	76.5%
Dartmouth	79.0%	75.0%	73.4%	74.2%	70.9%	70.5%	72.0%	72.0%	73.0%	74.0%	75.0%
Lowell	84.0%	86.0%	84.8%	86.3%	85.1%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%

Source: FY15-18 Student Profile; FY19-25 Campus

UMass Degree Completions

SIX-YEAR OUTCOMES OF UMASS FALL 2012 FIRST-YEAR, FIRST-TIME STUDENTS AT FALL 2018 (NUMBER OF STUDENTS)

	AMHERST	BOSTON	DARTMOUTH	LOWELL	SYSTEM	NATIONAL 4-YR PUBLIC
Starting cohort size	4,574	1,169	1,539	1,484	8,766	
Graduated from campus	80.2%	46.9%	56.3%	62.7%	68.6%	54.5%
Graduated from another UMass campus	1.1%	3.8%	5.9%	2.1%	2.5%	NA
Graduated from ANY UMass campus	81.3%	50.7%	62.2%	64.8%	71.1%	54.5%

SOURCE: UMass President's Office Fall Data Template and UMass Campus IR Offices, National Student Clearinghouse.

UMass Undergraduate Admissions

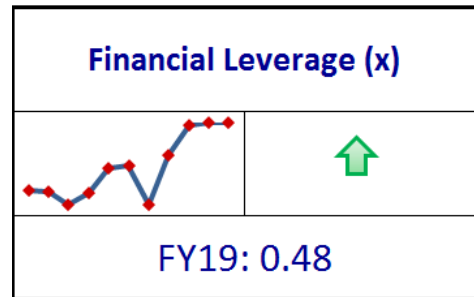
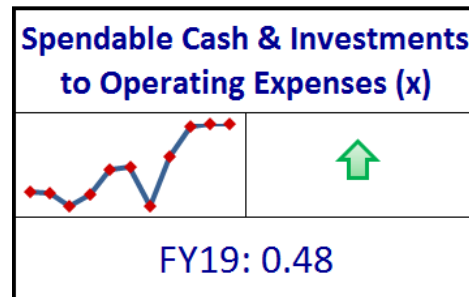
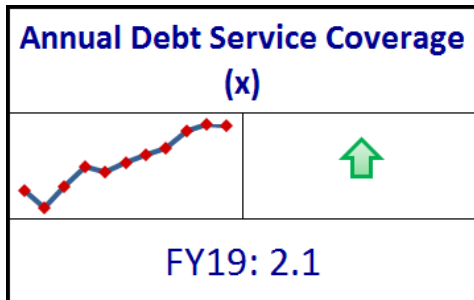
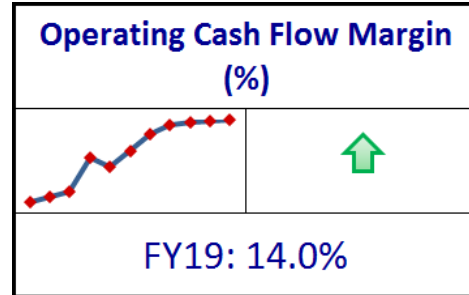
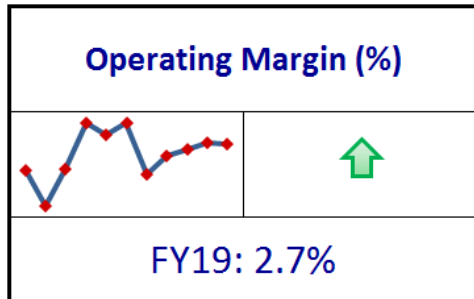
The system continues to grow in all phases of its admissions funnel, driven largely by gains at Amherst and Lowell.

SYSTEM UNDERGRADUATE ADMISSIONS: FIRST-YEAR STUDENTS

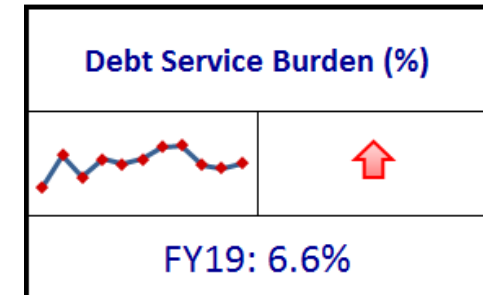
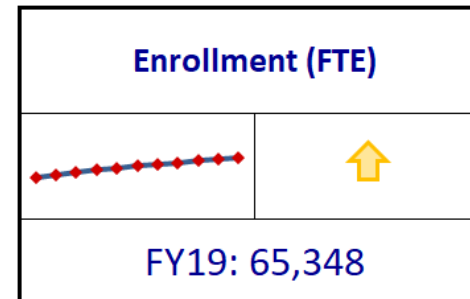
FUNNEL	FALL 2019	Δ VS FALL 2018	Δ VS FALL 2015
APPLICANTS	76.9K	▲ 3.5%	▲ 13.8%
ADMITS	52.9K	▲ 6.7%	▲ 27.2%
ENROLLS	11.5K	▲ 6.4%	▲ 23.1%

Key Take Aways

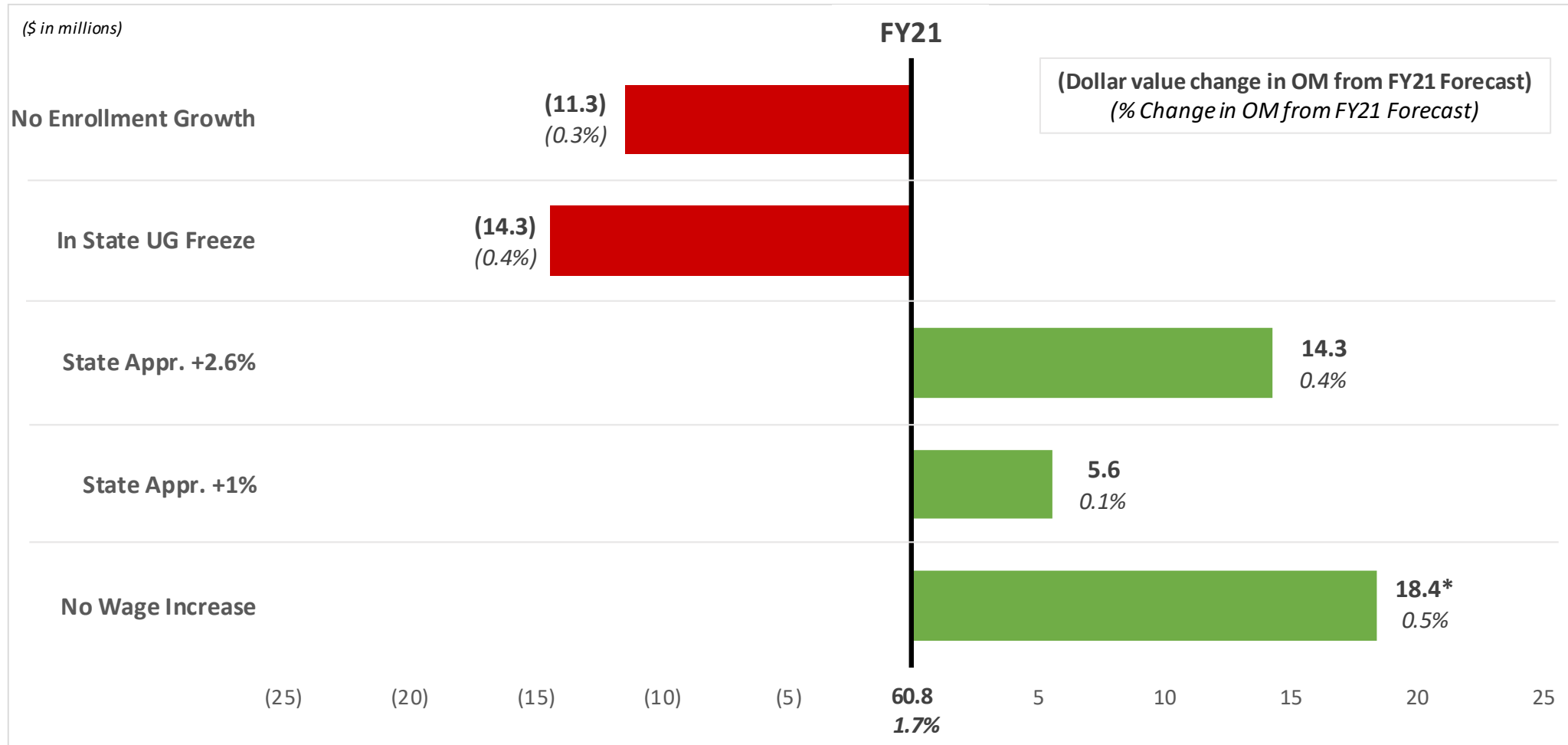
Improving



On Watch

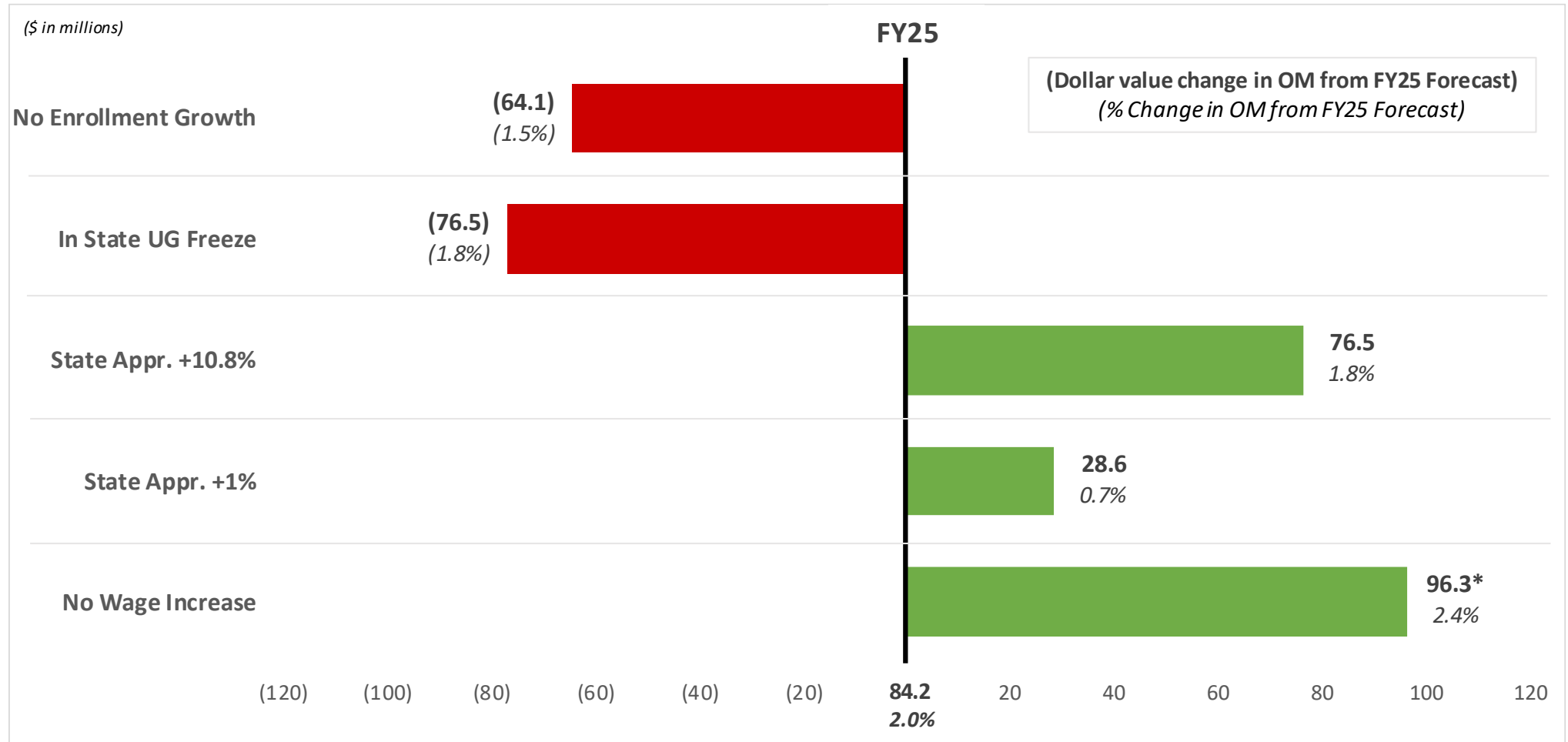


FY21 Forecast: Policy Change Impacts



*Net impact reflects an expense reduction of \$30.5 million and a reduction in state funding of \$12 million for state-funded collective bargaining.

FY25 Forecast: Cumulative Policy Change Impacts



*Net impact reflects an expense reduction of \$158.5 million and a reduction in state funding of \$62.2 million for state-funded collective bargaining.

Campus Data

Amherst

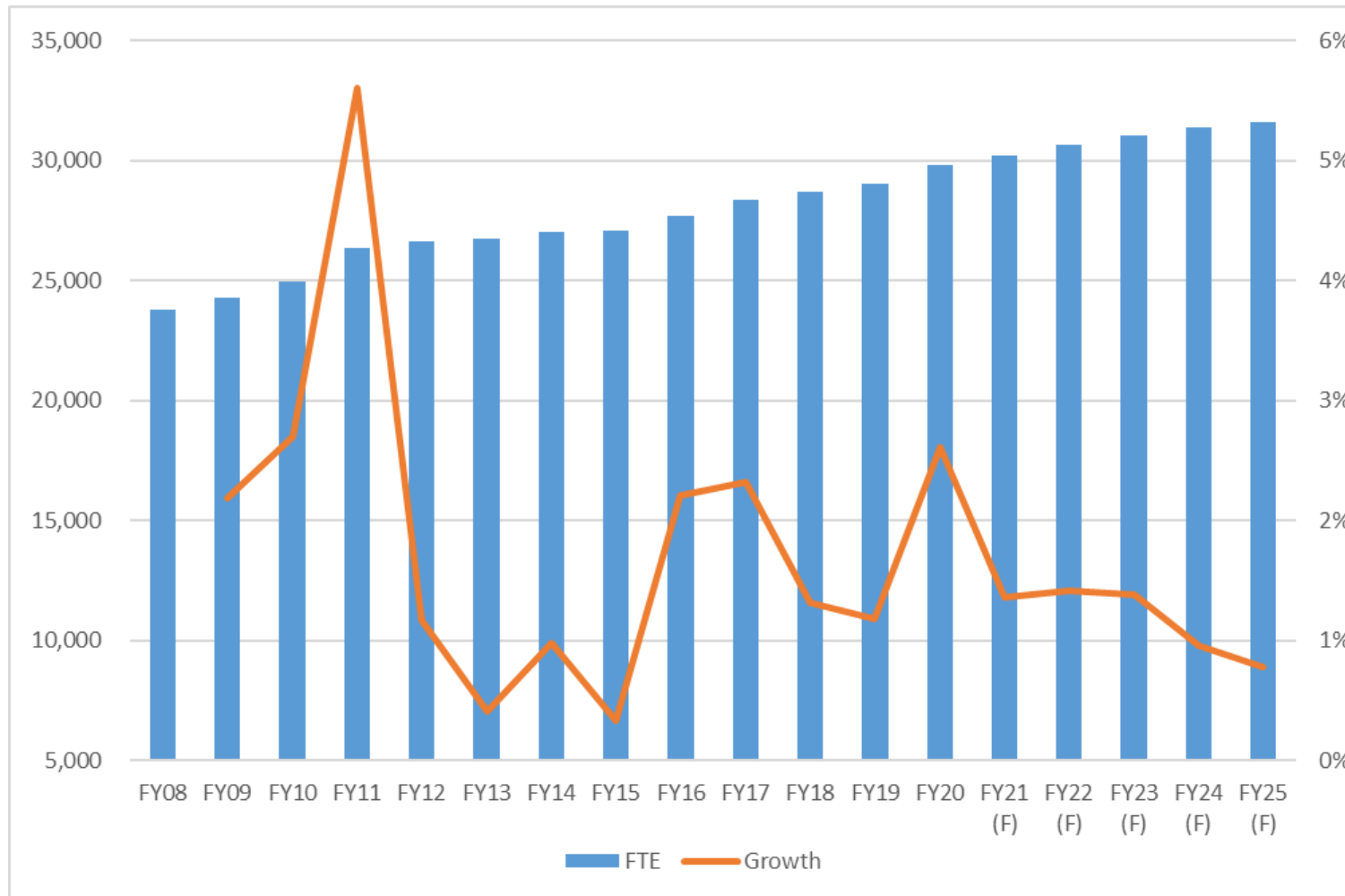
Amherst: Revenue & Expenses

(\$ in Thousands)

AMHERST

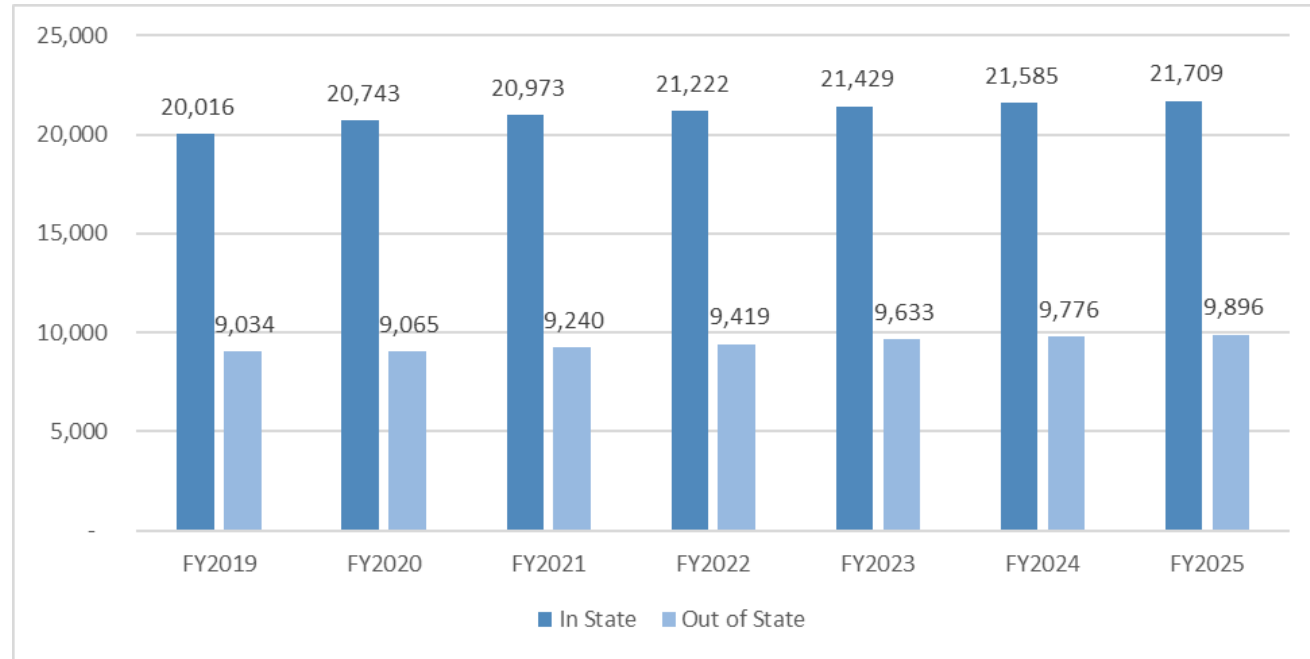
Revenues	Actual					Budget	Q1 Projection	Forecast					% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
Gross Tuition & Fees	440,723	481,072	513,450	541,665	562,859	578,480	589,596	614,842	641,666	671,657	699,029	726,295	18.1%	4.3%
Tuition Discounts	(99,261)	(114,881)	(139,441)	(150,824)	(151,628)	(161,062)	(164,630)	(171,782)	(179,025)	(186,232)	(193,639)	(200,714)	16.8%	4.0%
Discount Rate	22.5%	23.9%	27.2%	27.8%	26.9%	27.8%	27.9%	27.9%	27.9%	27.7%	27.7%	27.6%	-1.1%	0.0%
Net Tuition & Fees	341,462	366,191	374,009	390,841	411,231	417,418	424,966	443,061	462,641	485,425	505,390	525,582	18.6%	4.4%
Grants	137,136	145,217	148,554	153,007	163,645	161,034	169,243	174,316	179,542	184,925	190,469	196,179	12.5%	3.0%
Sales & Service, Educational	8,908	8,935	9,137	9,321	10,795	10,092	11,120	11,456	11,802	12,158	12,525	12,903	12.6%	3.0%
Auxiliary Enterprises	223,784	241,428	256,110	268,041	279,545	287,155	294,702	309,054	322,297	333,002	343,405	354,038	14.6%	3.5%
Other Operating	19,010	22,413	16,575	16,768	16,439	20,900	17,639	18,339	19,039	19,739	20,439	21,139	15.3%	3.6%
State appropriations	298,423	319,541	345,411	360,161	371,781	387,302	383,589	397,560	411,886	426,595	441,389	456,527	14.8%	3.5%
Other NonOperating	53,891	70,716	66,258	78,504	87,616	75,105	81,426	83,866	86,637	90,002	93,539	96,797	15.4%	3.7%
Total Revenues	1,082,614	1,174,441	1,216,054	1,276,643	1,341,052	1,359,006	1,382,685	1,437,651	1,493,843	1,551,845	1,607,156	1,663,164	15.7%	3.7%
% Growth	0.1%	8.5%	3.5%	5.0%	5.0%	1.3%	3.1%	5.8%	3.9%	3.9%	3.6%	3.5%		
Expenses	Actual					Budget	Q1 Projection	Forecast					% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
Salaries & Fringe	621,583	676,474	712,315	744,102	780,545	807,327	814,046	848,766	878,432	910,301	943,552	975,921	15.0%	3.6%
Non-personnel	295,012	308,850	306,743	326,076	341,923	347,939	358,372	360,847	376,435	396,921	414,942	423,127	17.3%	4.1%
Scholarships and fellowships	20,215	14,452	17,378	18,216	16,581	19,907	20,348	21,255	22,175	23,052	23,953	24,807	16.7%	3.9%
Depreciation	89,442	96,614	100,409	109,965	117,086	120,638	121,502	127,206	131,300	134,355	139,112	142,319	11.9%	2.8%
Interest	29,820	32,417	36,250	43,131	40,706	45,047	43,547	51,108	52,544	50,851	49,063	59,711	16.8%	4.4%
Total Expenses	1,056,072	1,128,807	1,173,095	1,241,490	1,296,841	1,340,857	1,357,814	1,409,183	1,460,887	1,515,480	1,570,622	1,625,886	15.4%	3.6%
% Growth	4.5%	6.9%	3.9%	5.8%	4.5%	3.4%	4.7%	5.1%	3.7%	3.7%	3.6%	3.5%		
Operating Margin	Actual					Budget	Q1 Projection	Forecast					% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
UMass OM Calc Revenues	1,086,696	1,176,957	1,209,147	1,274,604	1,333,206	1,353,748	1,378,046	1,433,596	1,490,399	1,548,038	1,602,969	1,658,449	15.7%	3.7%
Total Expenses	1,056,072	1,128,807	1,173,095	1,241,490	1,296,841	1,340,857	1,357,814	1,409,183	1,460,887	1,515,480	1,570,622	1,625,886	15.4%	3.6%
Surplus / (Deficit)	30,624	48,150	36,052	33,114	36,365	12,892	20,232	24,413	29,512	32,558	32,347	32,563	33.4%	7.8%
UMass OM Calc	2.8%	4.1%	3.0%	2.6%	2.7%	1.0%	1.5%	1.7%	2.0%	2.1%	2.0%	2.0%		

Amherst: Enrollment Trend



Source: Actuals from student profile.

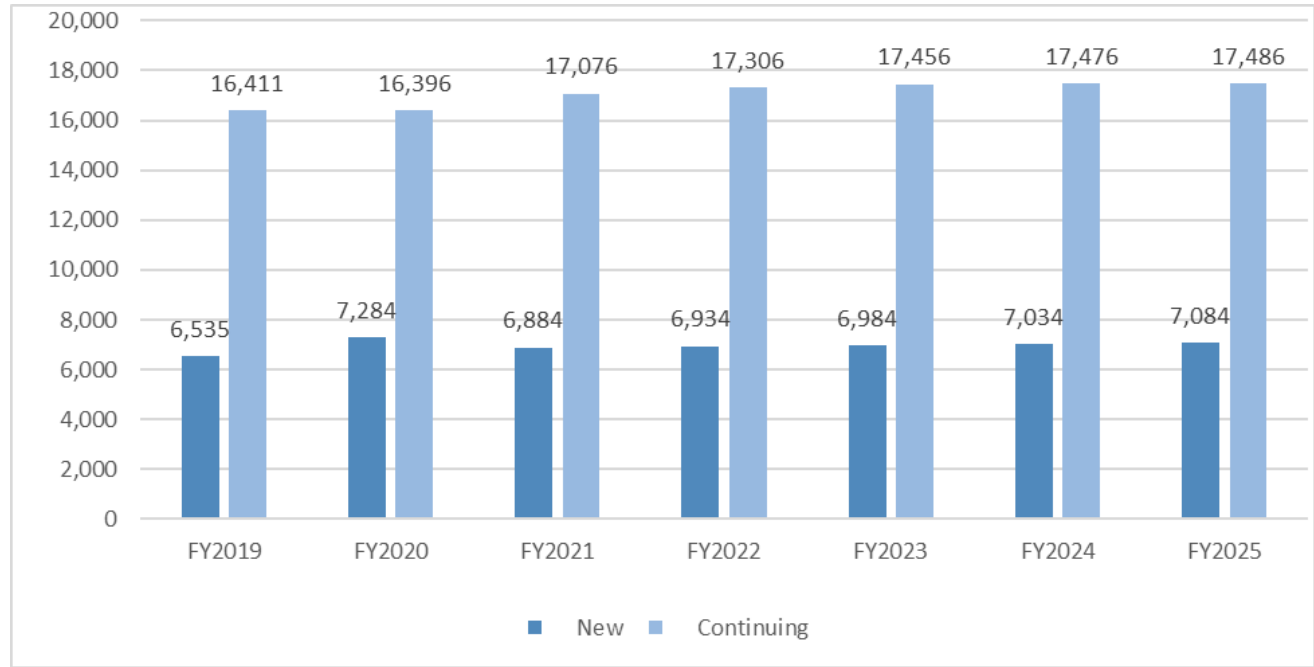
Amherst: Enrollment by Residency



Amherst Students (FTEs)	Actual		Forecast				
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
In State	20,016	20,743	20,973	21,222	21,429	21,585	21,709
% Change	1.0%	3.6%	1.1%	1.2%	1.0%	0.7%	0.6%
Out of State	9,034	9,065	9,240	9,419	9,633	9,776	9,896
% Change	1.7%	0.3%	1.9%	1.9%	2.3%	1.5%	1.2%
Total	29,051	29,808	30,213	30,641	31,063	31,361	31,605
% Change	1.2%	2.6%	1.4%	1.4%	1.4%	1.0%	0.8%

Source: Actuals from student profile.

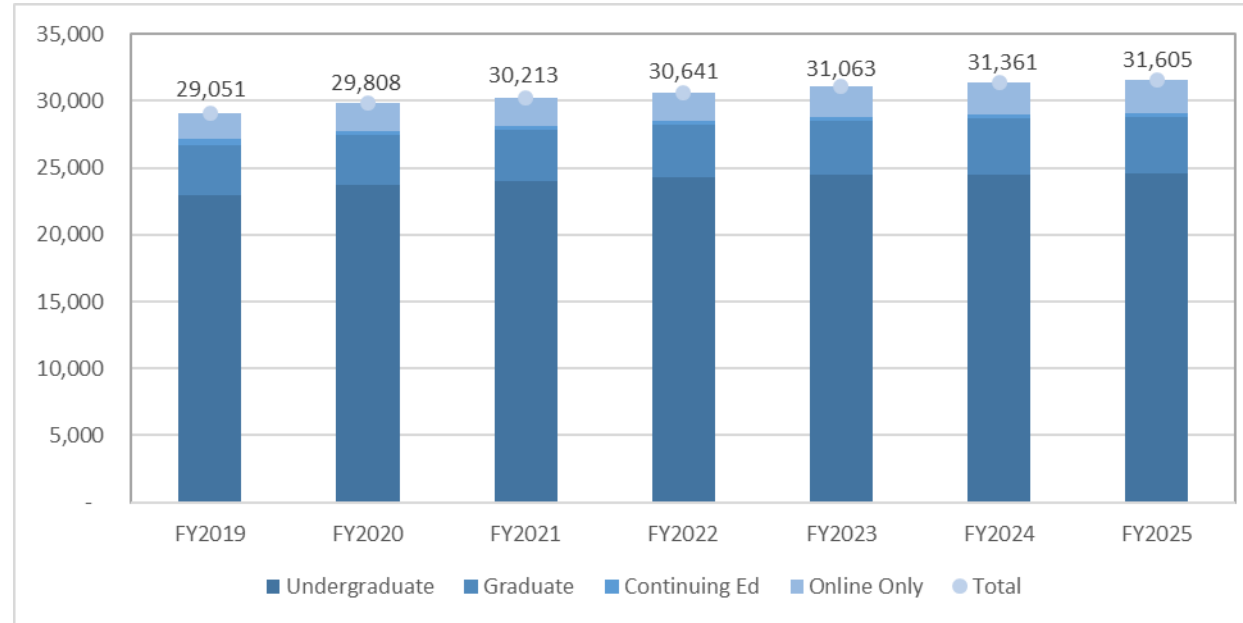
Amherst: Enrollment by New v Continuing



Amherst	Actual				Forecast		
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Undergraduate (FTEs)							
New	6,535	7,284	6,884	6,934	6,984	7,034	7,084
% Change	5.7%	11.5%	-5.5%	0.7%	0.7%	0.7%	0.7%
Continuing	16,411	16,396	17,076	17,306	17,456	17,476	17,486
% Change	-0.3%	-0.1%	4.1%	1.3%	0.9%	0.1%	0.1%
Undergraduate Total	22,945	23,680	23,960	24,240	24,440	24,510	24,570
% Change	1.3%	3.2%	1.2%	1.2%	0.8%	0.3%	0.2%

Source: Actuals from student profile.

Amherst: Enrollment by Career



Amherst Students (FTEs)	Actual		Forecast				
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Undergraduate	22,945	23,680	23,960	24,240	24,440	24,510	24,570
% Change	1.3%	3.2%	1.2%	1.2%	0.8%	0.3%	0.2%
Graduate	3,772	3,736	3,861	3,961	4,061	4,161	4,211
% Change	1.7%	-0.9%	3.3%	2.6%	2.5%	2.5%	1.2%
Continuing Ed	417	313	313	313	313	313	313
Online Only	1,917	2,079	2,079	2,127	2,249	2,377	2,511
% Change	-1.1%	2.5%	0.0%	2.0%	5.0%	5.0%	5.0%
Total	29,051	29,808	30,213	30,641	31,063	31,361	31,605
% Change	1.2%	2.6%	1.4%	1.4%	1.4%	1.0%	0.8%

Source: Actuals from student profile.

Amherst: Staffing

Employee FTEs	AMHERST									
	Actual			Budget	Actual	Forecast				
	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Restricted										
Faculty	64	49	44	50	42	42	42	42	42	42
Staff	317	374	396	375	382	382	382	382	382	382
Total Restricted	381	423	440	425	424	424	424	424	424	424
<i>FTE Change (#)</i>		42	17	(15)	(16)	(1)	-	-	-	-
Unrestricted General University Ops										
Faculty	1,486	1,509	1,508	1,578	1,620	1,643	1,660	1,688	1,720	1,744
Staff	2,611	2,692	2,773	2,742	2,762	2,778	2,784	2,793	2,801	2,803
Total General University Ops	4,097	4,201	4,281	4,320	4,382	4,421	4,444	4,481	4,521	4,547
<i>FTE Change (#)</i>		104	80	39	101	101	23	37	40	26
Unrestricted Aux./Independent Business										
Faculty	-	-	-	-	-	-	-	-	-	-
Staff	1,016	1,051	1,254	1,427	1,517	1,518	1,519	1,520	1,521	1,521
Total Aux./Independent Business	1,016	1,051	1,254	1,427	1,517	1,518	1,519	1,520	1,521	1,521
<i>FTE Change (#)</i>		35	203	173	263	91	1	1	1	-
Total Faculty & Staff	5,494	5,675	5,975	6,172	6,323	6,363	6,387	6,425	6,466	6,492
		3.3%	5.3%	3.3%	5.8%	3.1%	0.4%	0.6%	0.6%	0.4%

Amherst: Staffing Ratios

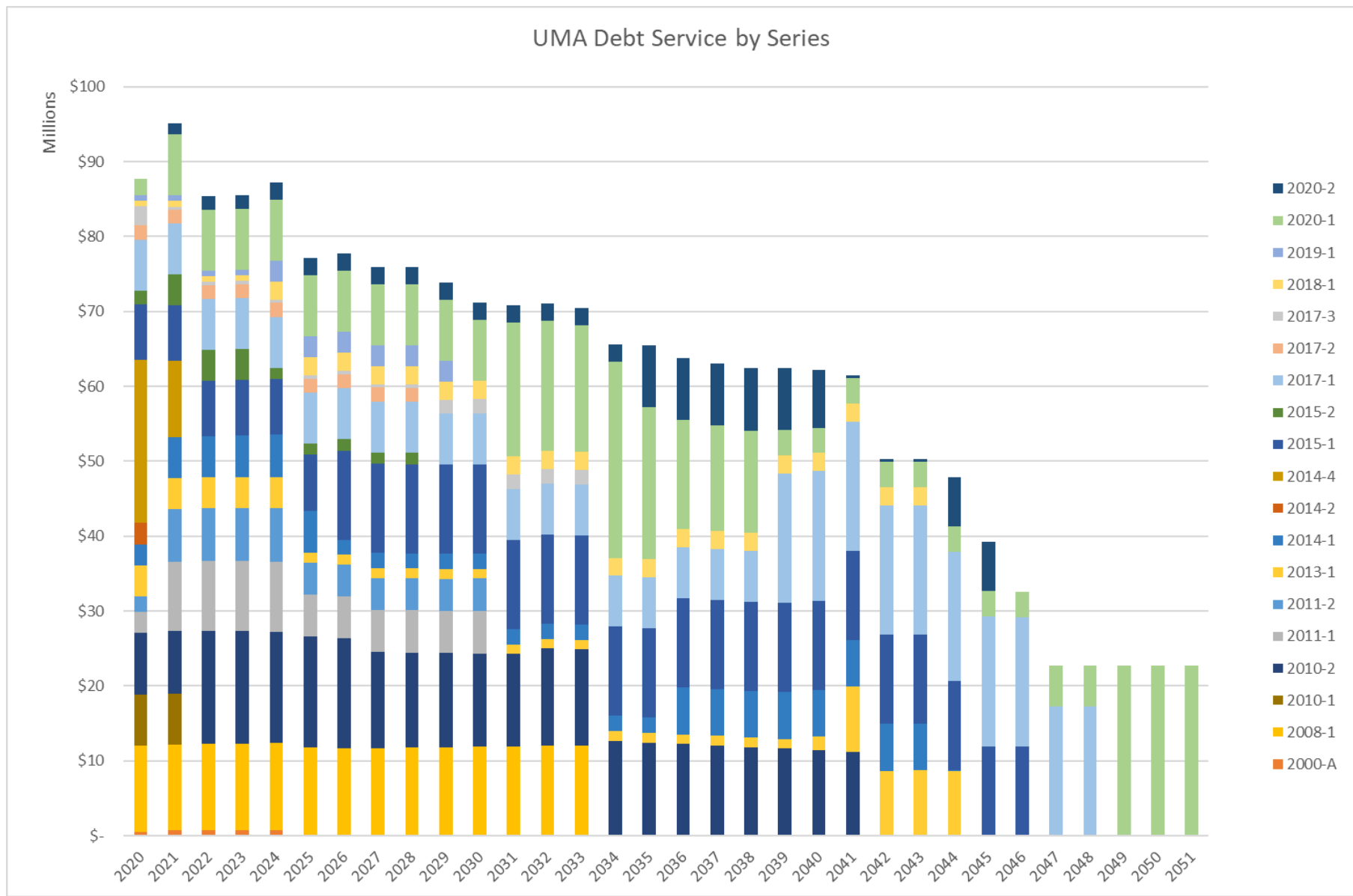
AMHERST

	Actual			Budget	Actual		Forecast			
	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
<i>Student - Faculty</i>										
Student (FTE)	28,339	28,711	29,051	29,326	29,808	30,213	30,641	31,063	31,361	31,605
Faculty (FTE)	1,550	1,558	1,552	1,628	1,662	1,685	1,702	1,730	1,762	1,786
Student-Faculty Ratio	18.3	18.4	18.7	18.0	17.9	17.9	18.0	18.0	17.8	17.7
<i>Staff - Faculty (All)</i>										
Staff (FTE)	3,944	4,117	4,423	4,544	4,661	4,678	4,685	4,695	4,704	4,706
Faculty (FTE)	1,550	1,558	1,552	1,628	1,662	1,685	1,702	1,730	1,762	1,786
Staff-Faculty Ratio	2.5	2.6	2.8	2.8	2.8	2.8	2.8	2.7	2.7	2.6
<i>Staff - Faculty (E&G)</i>										
Staff (FTE)	2,611	2,692	2,773	2,742	2,762	2,778	2,784	2,793	2,801	2,803
Faculty (FTE)	1,486	1,509	1,508	1,578	1,620	1,643	1,660	1,688	1,720	1,744
Staff-Faculty Ratio (E&G)	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.6	1.6

Amherst: Key Ratios

Key Ratio	AMHERST										
	Actual					Budget	Forecast				
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Operating Margin (%)	2.8%	4.1%	3.0%	2.6%	2.7%	1.0%	1.7%	2.0%	2.1%	2.0%	2.0%
Operating Margin (\$)	30,624	48,150	36,052	33,114	36,365	12,892	24,413	29,512	32,558	32,347	32,563
Operating Cash Flow Margin (%)	14.6%	15.6%	14.8%	14.8%	14.6%	13.8%	14.3%	14.5%	14.3%	14.1%	14.5%
Operating Cash Flow Margin (\$)	156,493	181,720	176,745	186,268	192,282	185,511	202,630	213,251	218,244	222,423	237,067
Debt Service Burden (%)	6.4%	6.4%	6.6%	6.8%	6.5%	6.8%	7.2%	6.5%	6.3%	6.3%	6.5%
Debt Service Coverage (x)	2.3	2.5	2.3	2.2	2.3	2.0	2.0	2.2	2.3	2.3	2.3
Financial Leverage (x)	0.48	0.50	0.50	0.54	0.54	0.38	0.53	0.57	0.62	0.54	0.58
Total Debt (\$ in thousands)	977,301	939,847	1,048,407	1,044,216	1,089,240	1,440,183	1,174,093	1,131,633	1,087,434	1,287,691	1,241,984
Spendable Cash & Investments to Op Expenses (x)	0.46	0.42	0.46	0.46	0.46	0.41	0.45	0.45	0.45	0.45	0.45
Enrollment	27,098	27,697	28,339	28,711	29,051	29,808	30,213	30,641	31,063	31,361	31,605
Enrollment (% Change)		2.2%	2.3%	1.3%	1.2%	2.6%	1.4%	1.4%	1.4%	1.0%	0.8%

Includes new borrowing in FY21 & FY24, total debt does not include P3 financing in FY21-FY25 pending decision on deal structure



2020 Refunding results are preliminary and subject to market volatility.

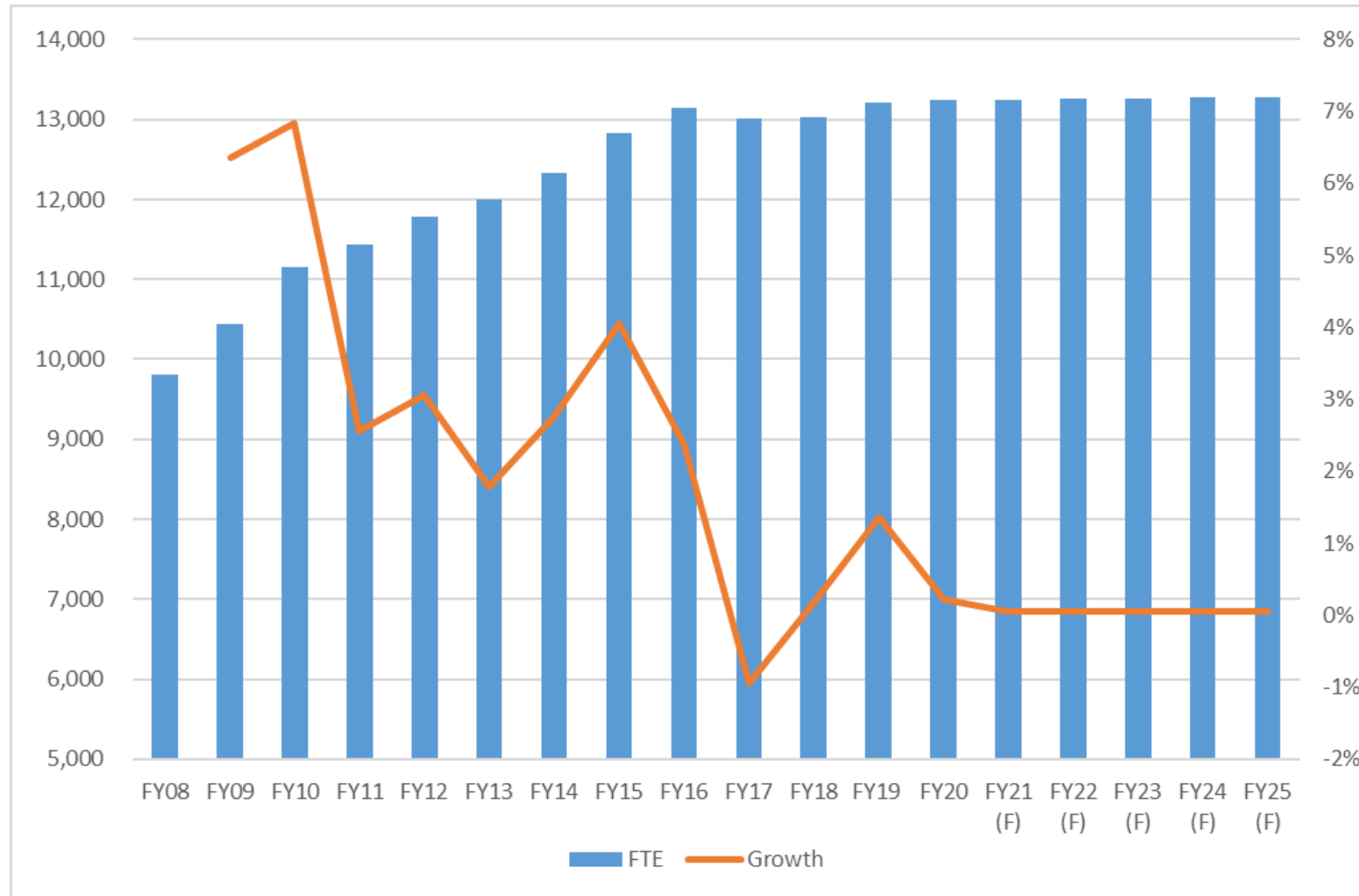
Boston

Boston: Revenue & Expenses

(\$ in Thousands)

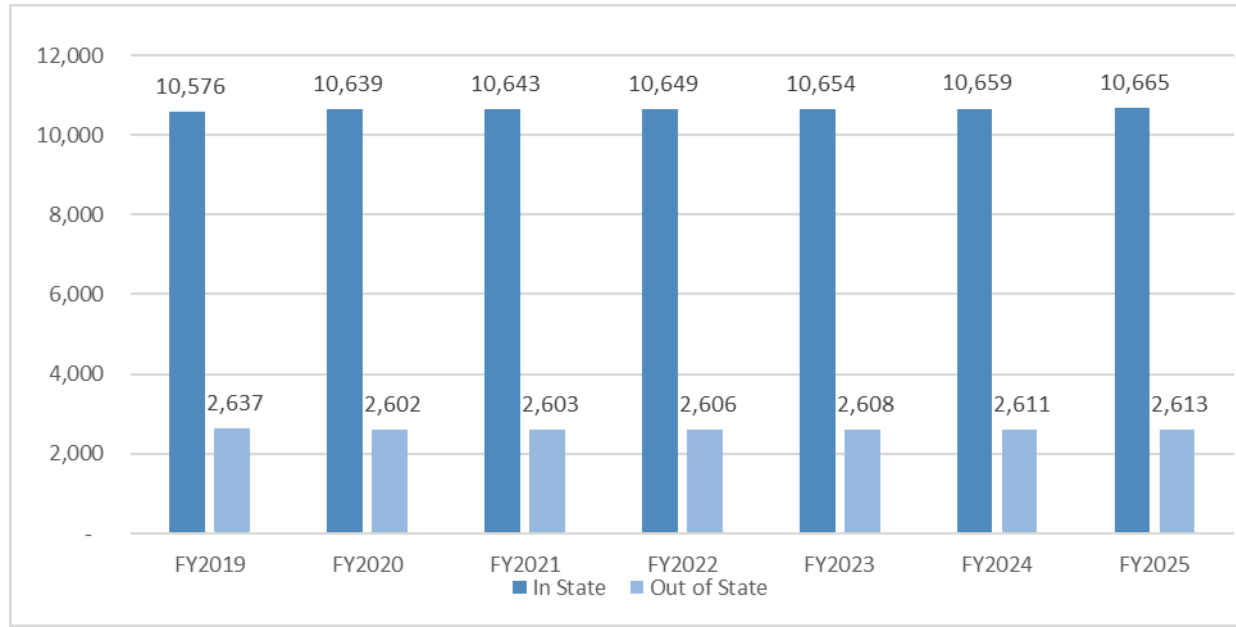
Revenues	BOSTON													
	Actual					Budget	Q1 Projection	Forecast					% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
Gross Tuition & Fees	213,968	232,355	240,235	243,760	245,734	247,982	249,051	254,086	259,768	265,599	271,585	277,729	9.3%	2.2%
Tuition Discounts	(44,311)	(45,471)	(53,820)	(57,790)	(64,836)	(65,926)	(66,612)	(71,089)	(76,200)	(77,966)	(79,784)	(81,658)	14.9%	3.4%
Discount Rate	20.7%	19.6%	22.4%	23.7%	26.4%	26.6%	26.7%	28.0%	29.3%	29.4%	29.4%	29.4%	5.1%	1.2%
Net Tuition & Fees	169,657	186,884	186,415	185,970	180,898	182,056	182,438	182,997	183,567	187,634	191,801	196,071	7.1%	1.7%
Grants	48,561	53,927	58,201	56,212	53,536	56,211	56,211	56,211	56,211	56,211	56,211	56,211	0.0%	0.0%
Sales & Service, Educational	4,197	3,709	3,979	4,072	4,312	3,962	4,312	4,312	4,312	4,312	4,312	4,312	0.0%	0.0%
Auxiliary Enterprises	9,211	5,965	6,167	5,199	12,315	13,621	14,107	14,781	15,008	15,237	15,378	15,512	4.9%	1.2%
Other Operating	854	2,837	1,818	1,758	2,218	3,101	2,743	2,743	4,687	4,687	4,687	4,687	70.9%	10.4%
State appropriations	110,295	117,987	130,157	135,605	140,659	144,708	145,190	150,425	155,628	160,949	166,417	172,009	14.3%	3.3%
Other NonOperating	33,347	35,093	36,597	37,773	42,529	38,863	40,646	39,882	41,641	41,793	41,967	41,986	5.3%	1.3%
Total Revenues	376,122	406,402	423,334	426,589	436,467	442,523	445,647	451,352	461,054	470,823	480,771	490,787	8.7%	2.1%
% Growth	3.9%	8.1%	4.2%	0.8%	2.3%	1.4%	2.1%	2.0%	2.1%	2.1%	2.1%	2.1%		
Expenses	Actual					Budget	Q1 Projection	Forecast					% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
Salaries & Fringe	244,755	266,100	275,330	269,465	269,723	268,359	272,711	273,615	279,620	283,720	291,285	299,991	9.6%	2.3%
Non-personnel	95,721	101,713	98,250	98,972	98,428	101,938	101,053	99,591	99,071	100,192	101,354	102,384	2.8%	0.7%
Scholarships and fellowships	12,254	16,047	16,161	17,180	17,983	17,180	17,983	17,983	17,983	17,983	17,983	17,983	0.0%	0.0%
Depreciation	16,572	18,988	22,246	24,433	28,010	33,578	33,238	35,029	38,081	40,696	42,231	42,705	21.9%	4.8%
Interest	8,133	9,064	12,476	14,152	16,823	21,468	20,662	20,620	19,379	18,815	18,303	17,908	-13.2%	-3.6%
Total Expenses	377,435	411,912	424,463	424,202	430,967	442,523	445,647	446,838	454,134	461,406	471,156	480,972	7.6%	1.8%
% Growth	8.6%	9.1%	3.0%	-0.1%	1.6%	2.7%	3.4%	1.0%	1.6%	1.6%	2.1%	2.1%		
Operating Margin	Actual					Budget	Q1 Projection	Forecast					% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
UMass OM Calc Revenues	379,257	406,543	421,462	426,589	434,863	442,523	445,647	451,352	461,054	470,823	480,771	490,787	8.7%	2.1%
Total Expenses	377,435	411,912	424,463	424,202	430,967	442,523	445,647	446,838	454,134	461,406	471,156	480,972	7.6%	1.8%
Surplus / (Deficit)	1,822	(5,369)	(3,001)	2,387	3,896	0	0	4,514	6,919	9,416	9,615	9,816	117.5%	16.3%
UMass OM Calc	0.5%	-1.3%	-0.7%	0.6%	0.9%	0.0%	0.0%	1.0%	1.5%	2.0%	2.0%	2.0%		

Boston: Enrollment Trend



Source: Actuals from student profile.

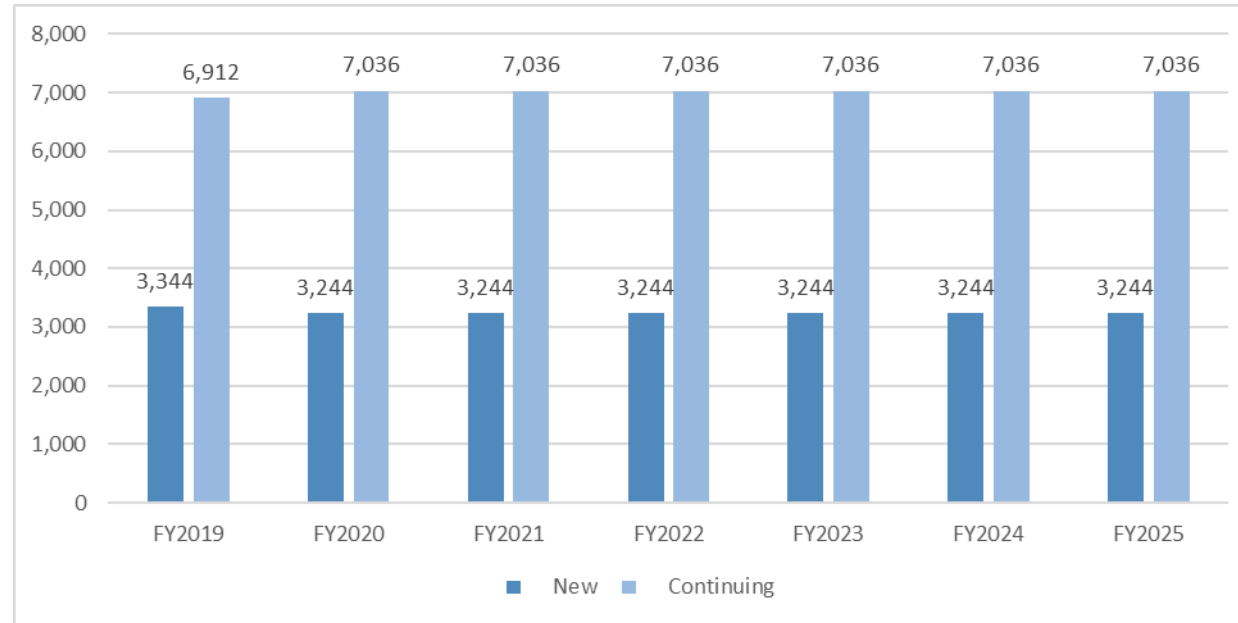
Boston: Enrollment by Residency



Boston Students (FTEs)	Actual		Forecast				
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
In State	10,576	10,639	10,643	10,649	10,654	10,659	10,665
% Change	3.2%	0.6%	0.0%	0.0%	0.1%	0.1%	0.1%
Out of State	2,637	2,602	2,603	2,606	2,608	2,611	2,613
% Change	-5.4%	-1.3%	0.1%	0.1%	0.1%	0.1%	0.1%
Total	13,213	13,241	13,247	13,254	13,262	13,270	13,278
% Change	1.4%	0.2%	0.0%	0.1%	0.1%	0.1%	0.1%

Source: Actuals from student profile.

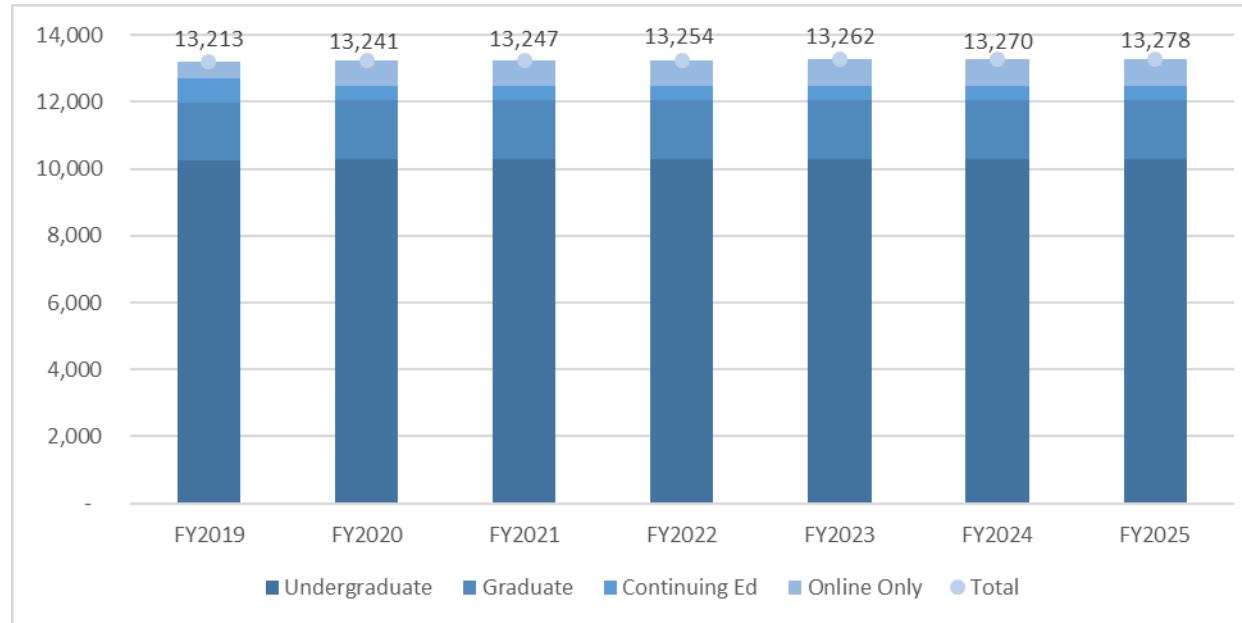
Boston: Enrollment by New v Continuing



Boston Undergraduate (FTEs)	Actual			Forecast			
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
New	3,344	3,244	3,244	3,244	3,244	3,244	3,244
% Change	11.6%	-3.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Continuing	6,912	7,036	7,036	7,036	7,036	7,036	7,036
% Change	1.1%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Undergraduate Total	10,256	10,280	10,280	10,280	10,280	10,280	10,280
% Change	4.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Actuals from student profile.

Boston: Enrollment by Career



Boston Students (FTEs)	Actual		Forecast				
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Undergraduate	10,256	10,280	10,280	10,280	10,280	10,280	10,280
% Change	4.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Graduate	1,714	1,771	1,771	1,771	1,771	1,771	1,771
% Change	-4.9%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Continuing Ed	715	419	419	419	419	419	419
Online Only	528	769	777	784	792	800	808
% Change	-11.2%	-4.4%	0.6%	0.6%	0.7%	0.7%	0.7%
Total	13,213	13,241	13,247	13,254	13,262	13,270	13,278
% Change	1.4%	0.2%	0.0%	0.1%	0.1%	0.1%	0.1%

Source: Actuals from student profile.

Boston: Staffing

BOSTON

Employee FTEs	Actual			Budget Actual		Forecast				
	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Restricted										
Faculty	22	15	14	13	10	12	12	12	12	12
Staff	160	150	131	150	132	144	144	144	144	144
Total Restricted	182	165	145	163	142	156	156	156	156	156
<i>FTE Change (#)</i>		(17)	(20)	18	(3)	(7)	-	-	-	-
Unrestricted General University Ops										
Faculty	861	840	849	784	864	833	828	821	820	820
Staff	1,024	929	960	866	941	914	908	887	886	886
Total General University Ops	1,885	1,769	1,809	1,651	1,805	1,747	1,736	1,708	1,706	1,706
<i>FTE Change (#)</i>		(116)	40	(159)	(4)	97	(11)	(28)	(2)	-
Unrestricted Aux./Independent Business										
Faculty	-	-	-	-	-	-	-	-	-	-
Staff	61	43	27	30	27	27	27	27	27	27
Total Aux./Independent Business	61	43	27	30	27	27	27	27	27	27
<i>FTE Change (#)</i>		(18)	(16)	3	-	(3)	-	-	-	-
Total Faculty & Staff	2,128	1,977	1,981	1,844	1,974	1,930	1,919	1,891	1,889	1,889
		-7.1%	0.2%	-7.0%	-0.4%	4.7%	-0.6%	-1.5%	-0.1%	0.0%

Boston: Staffing Ratios

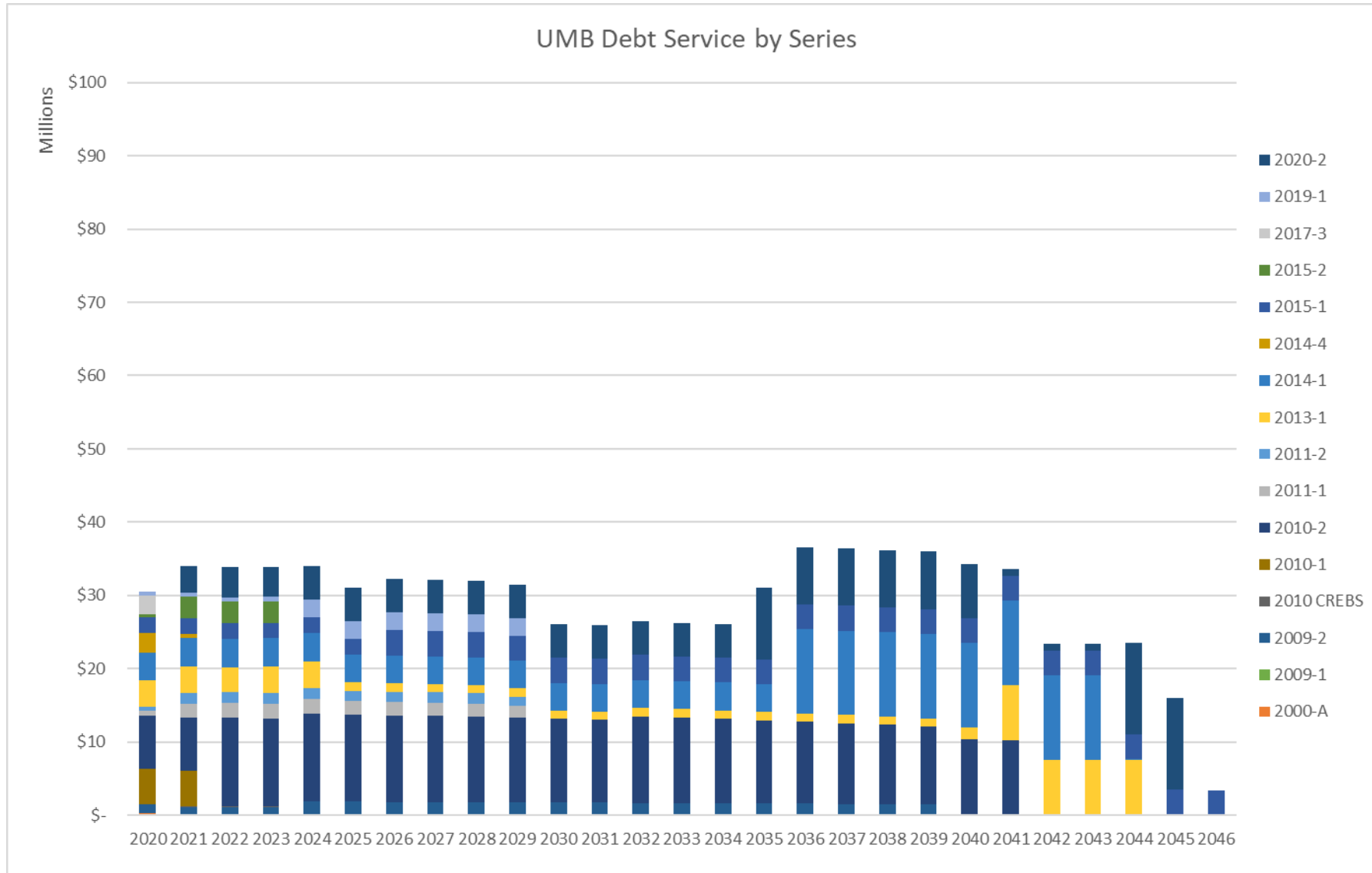
BOSTON

	Actual			Budget	Actual	Forecast				
	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
<i>Student - Faculty</i>										
Student (FTE)	13,101	13,036	13,213	13,134	13,241	13,247	13,254	13,262	13,270	13,278
Faculty (FTE)	883	855	863	797	874	845	840	833	832	832
Student-Faculty Ratio	14.8	15.2	15.3	16.5	15.2	15.7	15.8	15.9	15.9	16.0
<i>Staff - Faculty (All)</i>										
Staff (FTE)	1,245	1,122	1,119	1,046	1,101	1,085	1,079	1,058	1,057	1,057
Faculty (FTE)	883	855	863	797	874	845	840	833	832	832
Staff-Faculty Ratio	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
<i>Staff - Faculty (E&G)</i>										
Staff (FTE)	1,024	929	960	866	941	914	908	887	886	886
Faculty (FTE)	861	840	849	784	864	833	828	821	820	820
Staff-Faculty Ratio (E&G)	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1

Boston: Key Ratios

Key Ratio	BOSTON										
	Actual					Budget	Forecast				
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Operating Margin (%)	0.5%	-1.3%	-0.7%	0.6%	0.9%	0.0%	1.0%	1.5%	2.0%	2.0%	2.0%
Operating Margin (\$)	1,822	(5,369)	(3,001)	2,387	3,896	0	4,514	6,919	9,416	9,615	9,816
Operating Cash Flow Margin (%)	6.4%	5.4%	7.1%	9.0%	11.2%	12.6%	13.7%	14.1%	15.1%	15.5%	15.6%
Operating Cash Flow Margin (\$)	23,220	21,192	28,684	36,282	46,650	53,552	59,249	61,964	68,537	71,811	74,341
Debt Service Burden (%)	5.2%	4.9%	5.9%	6.3%	6.9%	7.9%	7.8%	7.4%	7.2%	6.6%	5.9%
Debt Service Coverage (x)	1.2	1.0	1.1	1.4	1.6	1.5	1.7	1.9	2.1	2.3	2.6
Financial Leverage (x)	0.23	0.16	0.12	0.12	0.16	0.12	0.18	0.43	0.42	0.48	0.52
Total Debt (\$ in thousands)	516,180	505,552	622,941	611,819	616,667	621,140	587,291	556,027	541,204	527,887	516,915
Spendable Cash & Investments to Op Expenses (x)	0.33	0.20	0.19	0.19	0.24	0.17	0.25	0.55	0.51	0.56	0.58
Enrollment	12,833	13,195	13,101	13,036	13,213	13,134	13,247	13,254	13,262	13,270	13,278
Enrollment (% Change)	4.1%	2.8%	-0.7%	-0.5%	1.4%	-0.6%	0.0%	0.1%	0.1%	0.1%	0.1%

*FY20 Debt Burden excludes Bayside principal pre-payment.



2020 Refunding results are preliminary and subject to market volatility.

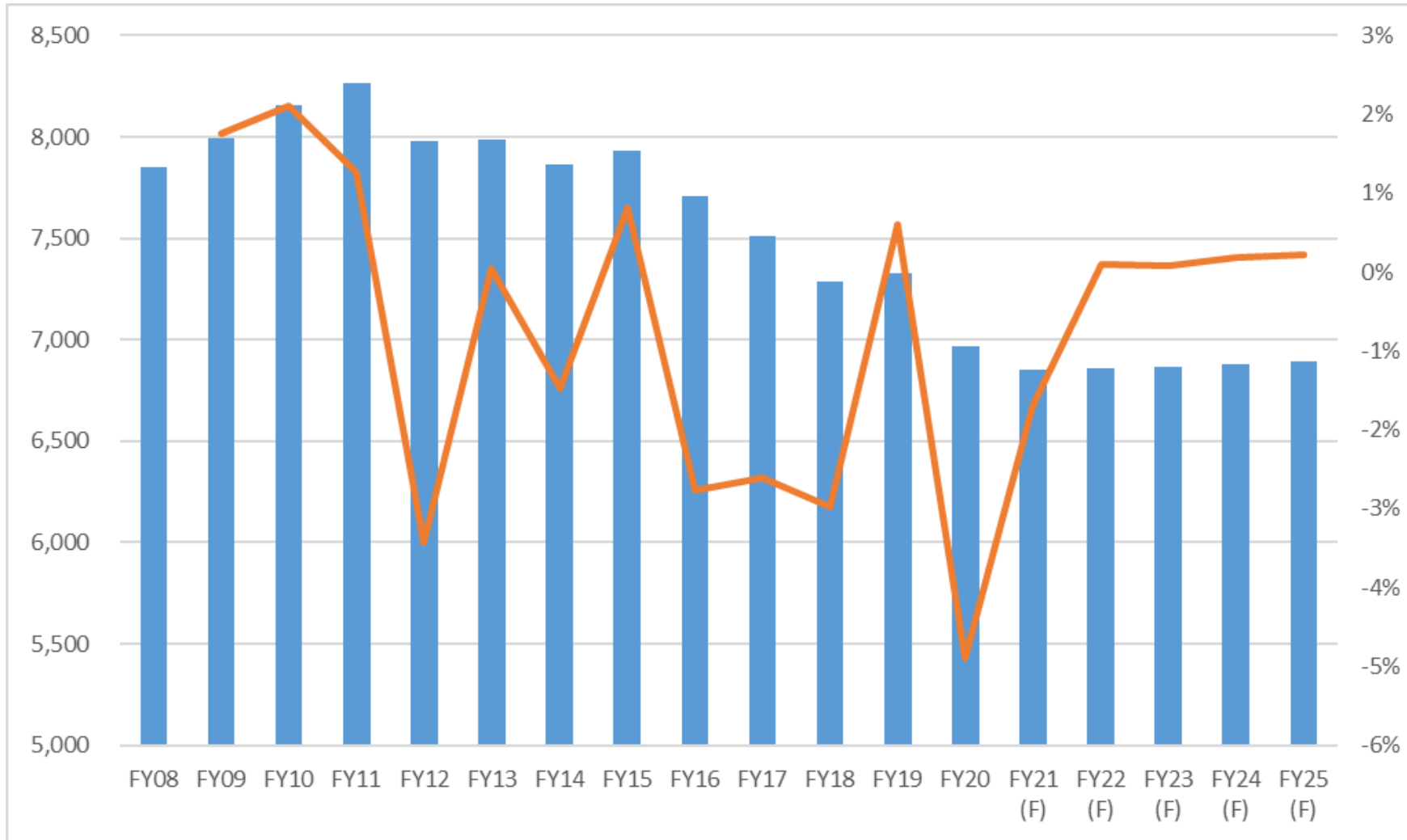
Dartmouth

Dartmouth: Revenue & Expenses

(\$ in Thousands)

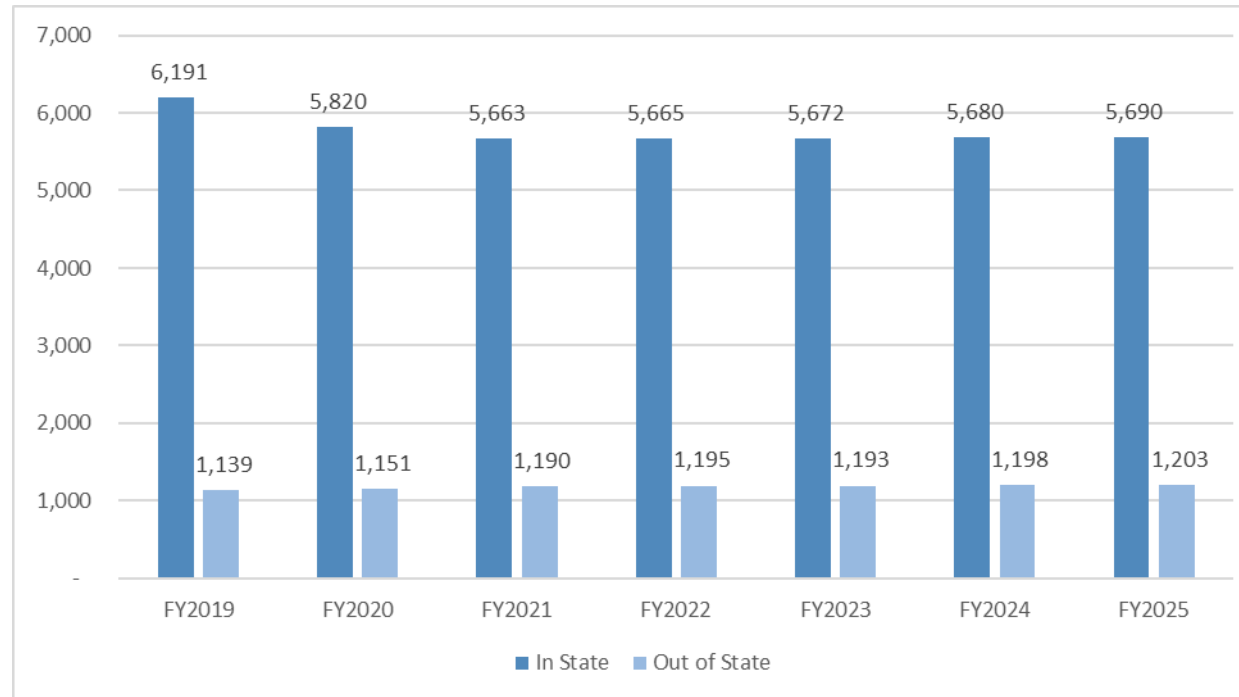
Revenues	DARTMOUTH													
	Actual					Budget	Q1 Projection	Forecast					% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
Gross Tuition & Fees	108,033	112,467	115,421	116,766	121,340	123,551	117,578	120,970	124,093	127,550	131,217	135,120	11.7%	2.8%
Tuition Discounts	(35,764)	(35,987)	(38,179)	(38,795)	(42,762)	(43,226)	(42,681)	(42,339)	(43,432)	(44,643)	(45,926)	(47,292)	11.7%	2.8%
Discount Rate	33.1%	32.0%	33.1%	33.2%	35.2%	35.0%	36.3%	35.0%	35.0%	35.0%	35.0%	35.0%	0.0%	0.0%
Net Tuition & Fees	72,269	76,480	77,242	77,971	78,578	80,325	74,897	78,631	80,661	82,907	85,291	87,828	11.7%	2.8%
Grants	17,761	18,511	19,534	18,925	18,918	18,951	18,196	19,000	19,000	19,000	19,000	19,000	0.0%	0.0%
Sales & Service, Educational	40	71	45	96	164	-	119	-	-	-	-	-	-	-
Auxiliary Enterprises	47,374	48,835	48,349	47,666	49,451	52,413	46,361	41,584	43,277	45,050	46,909	48,836	17.4%	4.1%
Other Operating	6,447	5,016	6,237	4,438	2,955	2,958	2,958	3,795	3,859	3,924	3,981	4,045	6.6%	1.6%
State appropriations	70,006	75,971	80,436	83,740	86,385	89,352	89,363	92,230	95,240	98,330	101,480	104,710	13.5%	3.2%
Other NonOperating	17,795	16,397	16,542	17,792	20,141	19,486	19,942	17,700	18,102	18,492	18,965	19,098	7.9%	1.9%
Total Revenues	231,692	241,281	248,385	250,628	256,592	263,485	251,836	252,940	260,139	267,703	275,626	283,517	12.1%	2.9%
% Growth	1.8%	4.1%	2.9%	0.9%	2.4%	2.7%	-1.9%	-4.0%	2.8%	2.9%	3.0%	2.9%		
Expenses	Actual					Budget	Q1 Projection	Forecast					% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
Salaries & Fringe	138,028	142,174	142,247	150,061	151,746	156,795	151,190	158,132	162,951	167,905	172,999	178,289	12.7%	3.0%
Non-personnel	54,923	63,166	64,262	65,795	66,939	71,711	68,244	58,000	60,000	59,750	61,500	64,750	11.6%	2.8%
Scholarships and fellowships	7,442	5,001	4,821	5,023	5,302	5,018	5,562	5,400	5,508	5,618	5,731	5,845	8.2%	2.0%
Depreciation	16,663	17,904	18,647	20,481	21,665	21,741	21,939	21,619	22,016	22,954	24,051	23,654	9.4%	2.3%
Interest	8,252	7,968	8,786	8,910	9,466	8,622	9,290	10,578	10,270	9,966	9,621	9,254	-12.5%	-3.3%
Total Expenses	225,308	236,213	238,763	250,270	255,118	263,887	256,226	253,729	260,745	266,193	273,902	281,792	11.1%	2.7%
% Growth	-2.5%	4.8%	1.1%	4.8%	1.9%	3.4%	0.4%	-3.8%	2.8%	2.1%	2.9%	2.9%		
Operating Margin	Actual					Budget	Q1 Projection	Forecast					% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
UMass OM Calc Revenues	231,792	243,647	247,205	253,071	258,776	265,733	254,286	256,840	264,039	271,603	279,526	287,417	11.9%	2.9%
Total Expenses	225,308	236,213	238,763	250,270	255,118	263,887	256,226	253,729	260,745	266,193	273,902	281,792	11.1%	2.7%
Surplus / (Deficit)	6,484	7,434	8,442	2,801	3,658	1,846	(1,940)	3,111	3,294	5,410	5,624	5,625	80.8%	18.5%
UMass OM Calc	2.8%	3.1%	3.4%	1.1%	1.4%	0.7%	-0.8%	1.2%	1.2%	2.0%	2.0%	2.0%		

Dartmouth: Enrollment Trend



Source: Actuals from student profile.

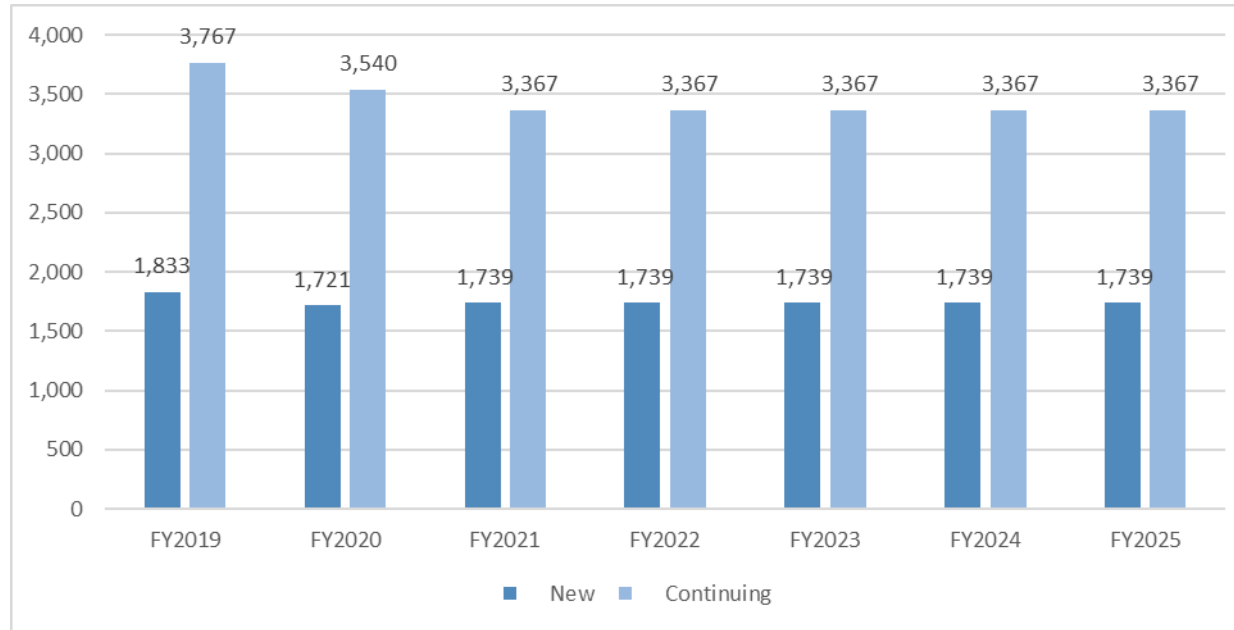
Dartmouth: Enrollment by Residency



Dartmouth Students (FTEs)	Actual				Forecast		
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
In State	6,191	5,820	5,663	5,665	5,672	5,680	5,690
% Change	-0.3%	-6.0%	-2.7%	0.0%	0.1%	0.1%	0.2%
Out of State	1,139	1,151	1,190	1,195	1,193	1,198	1,203
% Change	5.9%	1.1%	3.4%	0.4%	-0.2%	0.4%	0.4%
Total	7,330	6,971	6,853	6,860	6,865	6,878	6,893
% Change	0.6%	-4.9%	-1.7%	0.1%	0.1%	0.2%	0.2%

Source: Actuals from student profile.

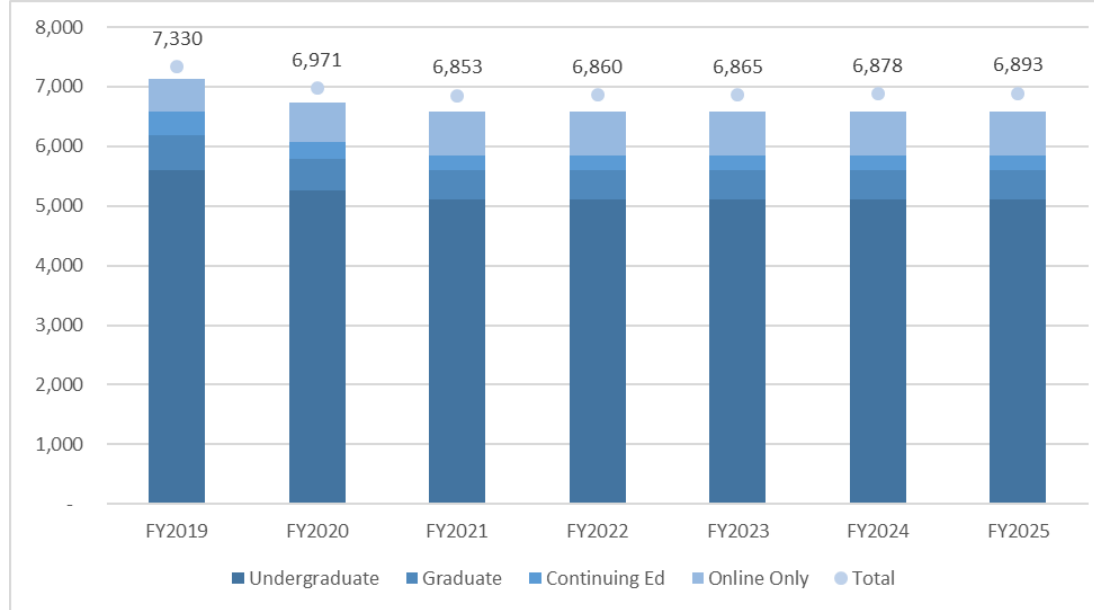
Dartmouth: Enrollment by New v Continuing



Dartmouth	Actual			Forecast			
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Undergraduate (FTEs)							
New	1,833	1,721	1,739	1,739	1,739	1,739	1,739
% Change	11.3%	-6.1%	1.1%	0.0%	0.0%	0.0%	0.0%
Continuing	3,767	3,540	3,367	3,367	3,367	3,367	3,367
% Change	-4.3%	-6.0%	-4.9%	0.0%	0.0%	0.0%	0.0%
Undergraduate Total	5,600	5,261	5,106	5,106	5,106	5,106	5,106
% Change	0.3%	-6.1%	-2.9%	0.0%	0.0%	0.0%	0.0%

Source: Actuals from student profile.

Dartmouth: Enrollment by Career



Dartmouth Students (FTEs)	Actual			Forecast			
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Undergraduate	5,600	5,261	5,105	5,105	5,105	5,105	5,105
% Change	0.3%	-6.1%	-3.0%	0.0%	0.0%	0.0%	0.0%
Graduate	594	536	490	490	490	490	490
% Change	-14.9%	-9.8%	-8.6%	0.0%	0.0%	0.0%	0.0%
Continuing Ed	391	279	255	255	255	255	255
Online Only	546	649	727	727	727	727	727
% Change	13.9%	-1.0%	5.8%	0.0%	0.0%	0.0%	0.0%
Law School	199	246	276	283	288	301	316
% Change	8.4%	23.6%	12.2%	2.5%	1.8%	4.5%	5.0%
Total	7,330	6,971	6,853	6,860	6,865	6,878	6,893
% Change	0.6%	-4.9%	-1.7%	0.1%	0.1%	0.2%	0.2%

Source: Actuals from student profile.

Dartmouth: Staffing

DARTMOUTH

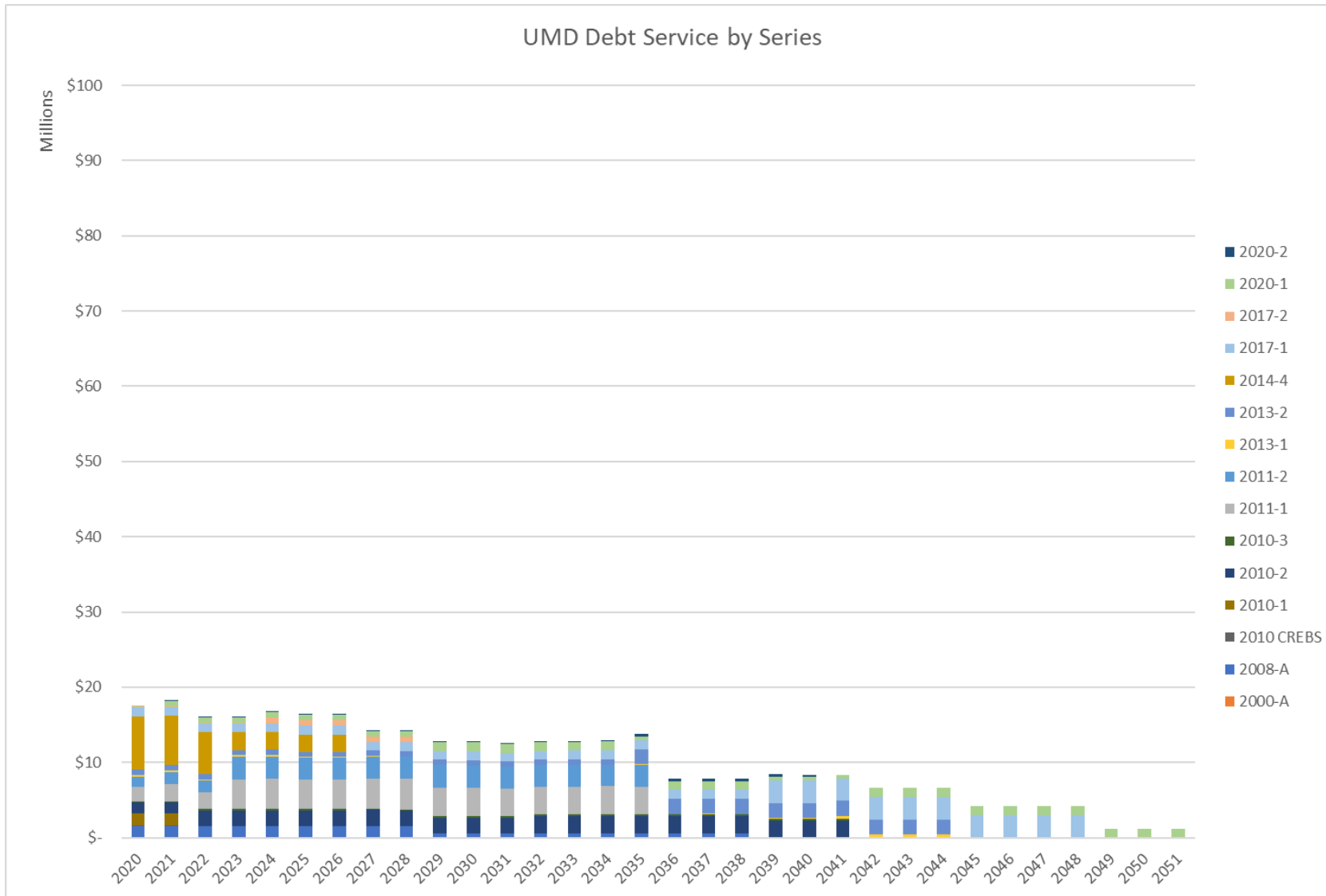
Employee FTEs	Actual			Budget	Actual	Forecast				
	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Restricted										
Faculty	4	4	4	5	5	3	3	3	3	3
Staff	18	32	35	35	30	30	30	30	30	30
Total Restricted	22	36	39	40	36	33	33	33	33	33
<i>FTE Change (#)</i>		14	3	1	(3)	(7)	-	-	-	-
Unrestricted General University Ops										
Faculty	419	452	405	457	456	429	424	420	420	420
Staff	571	593	582	578	578	563	560	560	560	560
Total General University Ops	990	1,045	987	1,035	1,034	992	984	980	980	980
<i>FTE Change (#)</i>		55	(58)	48	47	(43)	(8)	(4)	-	-
Unrestricted Aux./Independent Business										
Faculty	-	-	-	-	-	-	-	-	-	-
Staff	107	106	99	102	91	90	90	90	90	90
Total Aux./Independent Business	107	106	99	102	91	90	90	90	90	90
<i>FTE Change (#)</i>		(1)	(7)	3	(8)	(12)	-	-	-	-
Total Faculty & Staff	1,119	1,187	1,125	1,177	1,161	1,115	1,107	1,103	1,103	1,103
		6.1%	-5.2%	4.6%	3.2%	-5.3%	-0.7%	-0.4%	0.0%	0.0%

Dartmouth: Staffing Ratios

	DARTMOUTH									
	Actual			Budget	Actual	Forecast				
	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
<i>Student - Faculty</i>										
Student (FTE)	7,558	7,286	7,330	6,963	6,971	6,853	6,860	6,865	6,878	6,893
Faculty (FTE)	423	456	409	462	462	432	427	423	423	423
Student-Faculty Ratio	17.9	16.0	17.9	15.1	15.1	15.9	16.1	16.2	16.3	16.3
<i>Staff - Faculty (All)</i>										
Staff (FTE)	696	731	716	715	699	683	680	680	680	680
Faculty (FTE)	423	456	409	462	462	432	427	423	423	423
Staff-Faculty Ratio	1.6	1.6	1.8	1.5	1.5	1.6	1.6	1.6	1.6	1.6
<i>Staff - Faculty (E&G)</i>										
Staff (FTE)	571	593	582	578	578	563	560	560	560	560
Faculty (FTE)	419	452	405	457	456	429	424	420	420	420
Staff-Faculty Ratio (E&G)	1.4	1.3	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3

Dartmouth: Key Ratios

Key Ratio	DARTMOUTH										
	Actual					Budget	Forecast				
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Operating Margin (%)	2.8%	3.1%	3.4%	1.1%	1.4%	0.7%	1.2%	1.2%	2.0%	2.0%	2.0%
Operating Margin (\$)	6,484	7,434	8,442	2,801	3,658	1,846	3,111	3,294	5,410	5,624	5,625
Operating Cash Flow Margin (%)	12.5%	12.1%	13.9%	10.6%	12.8%	12.2%	12.9%	12.7%	13.4%	13.5%	12.9%
Operating Cash Flow Margin (\$)	27,482	28,208	33,475	25,525	32,192	31,656	32,153	32,518	35,206	36,553	36,045
Debt Service Burden (%)	9.3%	8.4%	7.8%	7.6%	7.8%	7.0%	8.4%	7.4%	7.2%	7.3%	7.0%
Debt Service Coverage (x)	1.3	1.4	1.8	1.3	1.6	1.7	1.5	1.7	1.8	1.8	1.8
Financial Leverage (x)	0.16	0.20	0.21	0.28	0.19	0.14	0.16	0.17	0.19	0.22	0.24
Total Debt (\$ in thousands)	217,036	201,118	215,530	205,513	351,884	334,020	347,375	337,710	327,489	315,980	304,092
Spendable Cash & Investments to Op Expenses (x)	0.16	0.17	0.20	0.24	0.27	0.18	0.23	0.23	0.24	0.26	0.27
Enrollment	7,930	7,766	7,558	7,286	7,330	7,291	6,853	6,860	6,865	6,878	6,893
Enrollment (% Change)	0.8%	-2.1%	-2.7%	-3.6%	0.6%	-0.5%	-2%	0.1%	0.1%	0.2%	0.2%



2020 Refunding results are preliminary and subject to market volatility.

Lowell

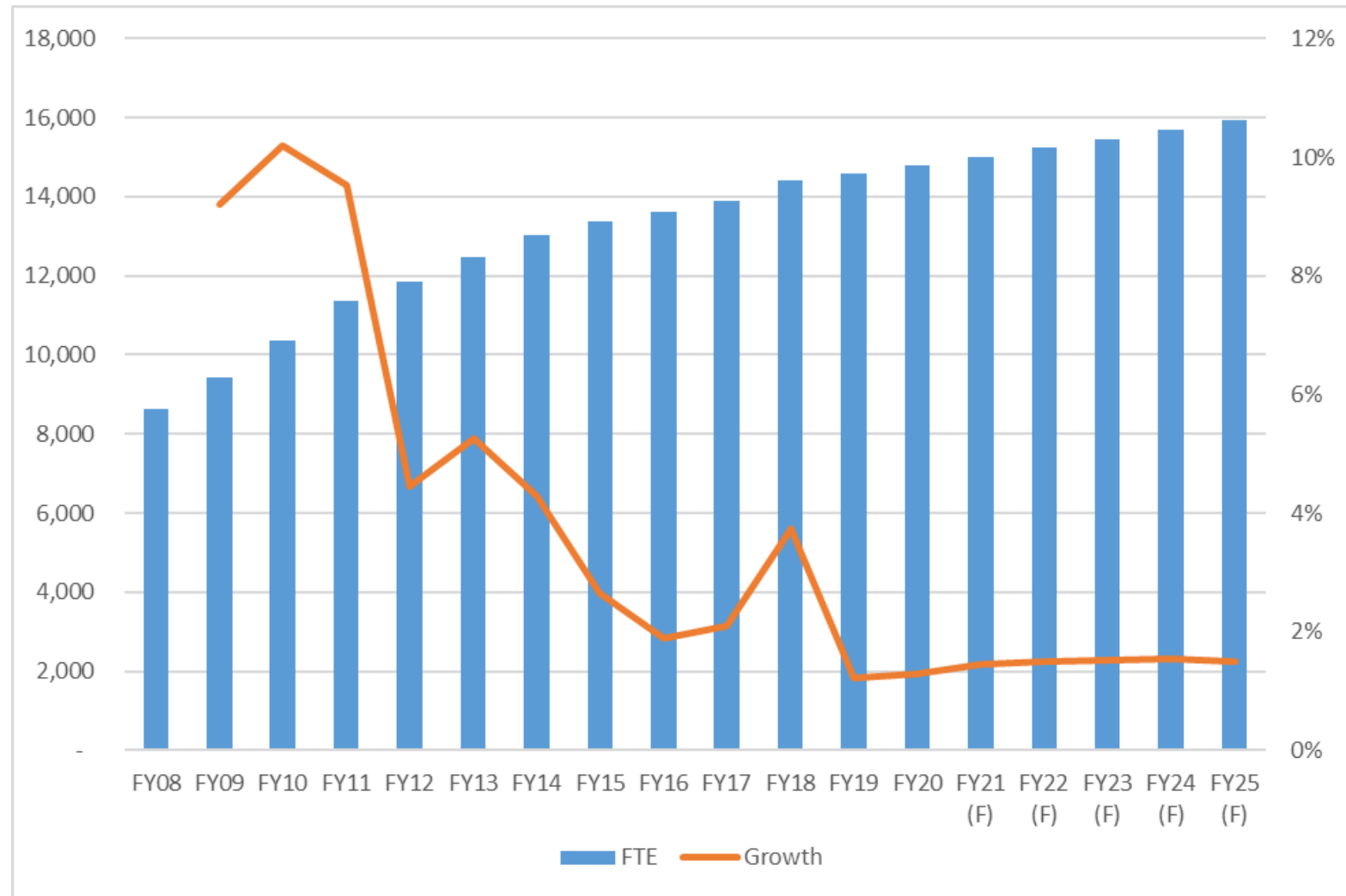
Lowell: Revenue & Expenses

(\$ in Thousands)

LOWELL

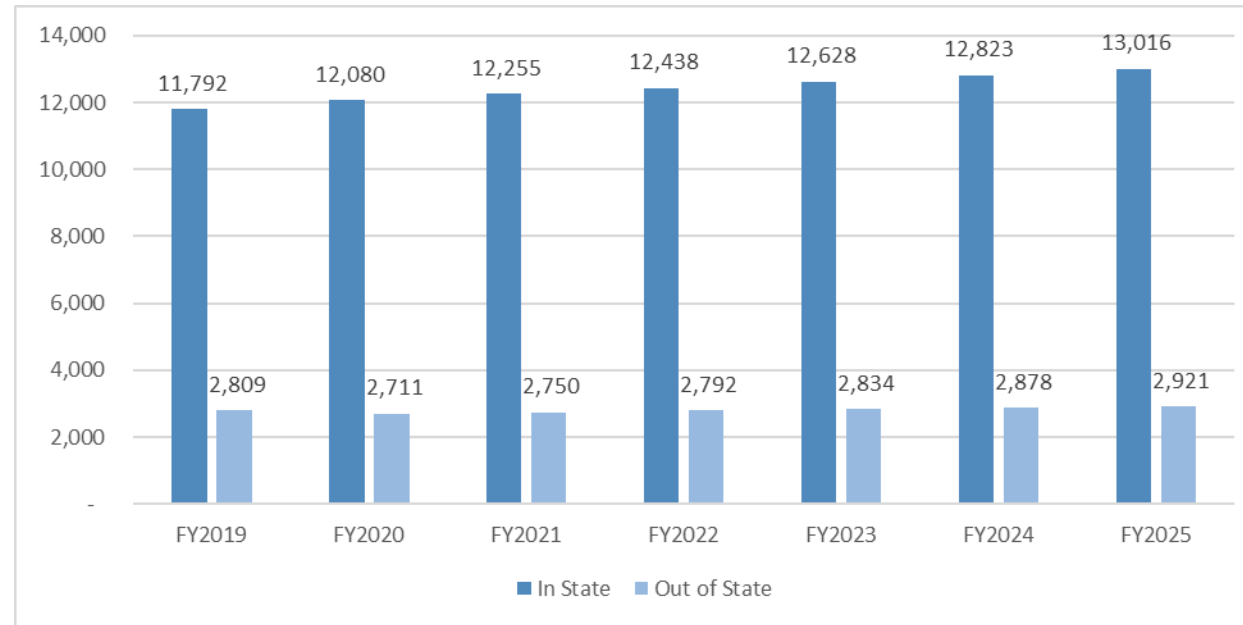
Revenues	Actual					Budget	Q1 Projection	Forecast					% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
Gross Tuition & Fees	205,731	224,065	243,228	256,002	259,130	274,927	269,475	279,465	289,369	300,670	312,538	324,879	16.3%	3.7%
Tuition Discounts	(40,768)	(45,417)	(54,517)	(61,218)	(65,369)	(67,770)	(68,461)	(70,853)	(72,427)	(74,079)	(76,136)	(78,459)	10.7%	2.5%
Discount Rate	19.8%	20.3%	22.4%	23.9%	25.2%	24.7%	25.4%	25.4%	25.0%	24.6%	24.4%	24.2%	-4.7%	-1.2%
Net Tuition & Fees	164,963	178,648	188,711	194,784	193,761	207,157	201,014	208,612	216,942	226,591	236,402	246,420	18.1%	4.1%
Grants	44,186	41,346	42,190	44,875	53,613	54,308	56,539	60,243	64,124	68,200	72,475	76,959	27.7%	5.9%
Sales & Service, Educational	66	89	767	925	1,436	979	1,470	1,514	1,559	1,606	1,654	1,704	12.5%	2.9%
Auxiliary Enterprises	52,725	57,782	60,570	65,030	68,923	69,681	70,460	72,237	74,060	75,930	77,847	79,813	10.5%	2.5%
Other Operating	8,205	7,984	7,008	7,438	8,129	8,070	8,373	8,625	8,883	9,149	9,424	9,706	12.5%	2.9%
State appropriations	96,633	104,725	111,859	117,668	122,802	127,702	127,381	131,767	136,263	140,883	144,885	149,449	13.4%	3.1%
Other NonOperating	23,378	27,826	28,738	28,322	36,106	30,692	32,337	33,904	35,009	36,240	36,839	37,256	9.9%	2.3%
Total Revenues	390,156	418,400	439,843	459,042	484,770	498,589	497,574	516,902	536,840	558,599	579,526	601,307	16.3%	3.7%
% Growth	7.8%	7.2%	5.1%	4.4%	5.6%	2.9%	2.6%	3.7%	3.9%	4.1%	3.7%	3.8%		
Expenses	Actual					Budget	Q1 Projection	Forecast					% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
Salaries & Fringe	219,200	239,536	249,312	262,133	274,695	286,589	287,526	298,554	310,754	326,064	341,299	353,947	18.6%	4.2%
Non-personnel	111,693	114,923	116,761	121,734	128,938	133,023	130,210	132,289	135,224	138,278	140,682	145,678	10.1%	2.4%
Scholarships and fellowships	9,383	9,134	9,316	9,983	9,641	10,891	10,097	10,450	10,682	10,926	11,229	11,572	10.7%	2.5%
Depreciation	28,666	32,985	34,127	37,806	42,147	42,514	44,169	45,591	47,624	48,447	51,254	55,658	22.1%	4.8%
Interest	18,371	21,272	18,790	19,896	21,231	22,796	22,796	25,091	24,471	23,824	23,224	22,503	-10.3%	-2.8%
Total Expenses	387,313	417,850	428,306	451,552	476,652	495,813	494,798	511,975	528,755	547,539	567,688	589,358	15.1%	3.5%
% Growth	10.1%	7.9%	2.5%	5.4%	5.6%	4.0%	3.8%	3.3%	3.3%	3.6%	3.7%	3.8%		
Operating Margin	Actual					Budget	Q1 Projection	Forecast					% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
UMass OM Calc Revenues	390,241	418,546	437,730	458,337	482,786	498,589	497,574	516,902	536,840	558,599	579,526	601,307	16.3%	3.7%
Total Expenses	387,313	417,850	428,306	451,552	476,652	495,813	494,798	511,975	528,755	547,539	567,688	589,358	15.1%	3.5%
Surplus / (Deficit)	2,928	696	9,424	6,785	6,134	2,776	2,776	4,927	8,085	11,060	11,838	11,949	142.5%	18.4%
UMass OM Calc	0.8%	0.2%	2.2%	1.5%	1.3%	0.6%	0.6%	1.0%	1.5%	2.0%	2.0%	2.0%		

Lowell: Enrollment Trend



Source: Actuals from student profile.

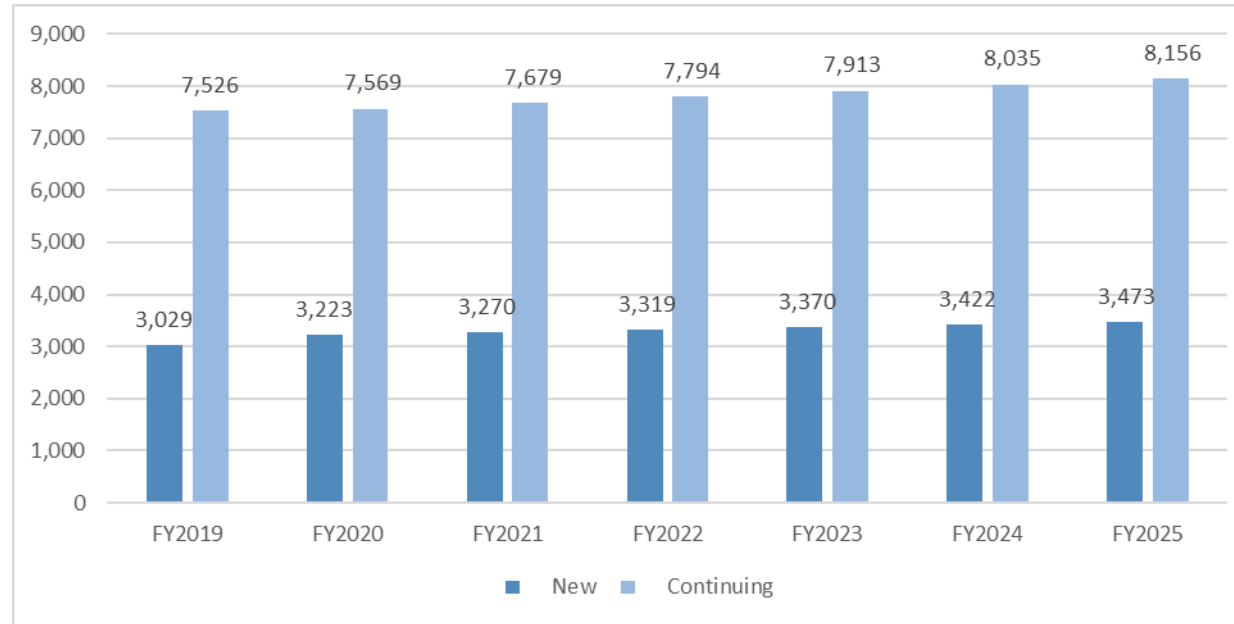
Lowell: Enrollment by Residency



LOWELL Students (FTEs)	Actual				Forecast		
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
In State	11,792	12,080	12,255	12,438	12,628	12,823	13,016
% Change	2.9%	2.4%	1.5%	1.5%	1.5%	1.5%	1.5%
Out of State	2,809	2,711	2,750	2,792	2,834	2,878	2,921
% Change	-5.0%	-3.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Total	14,601	14,790	15,005	15,230	15,462	15,701	15,937
% Change	1.2%	1.3%	1.5%	1.5%	1.5%	1.5%	1.5%

Source: Actuals from student profile.

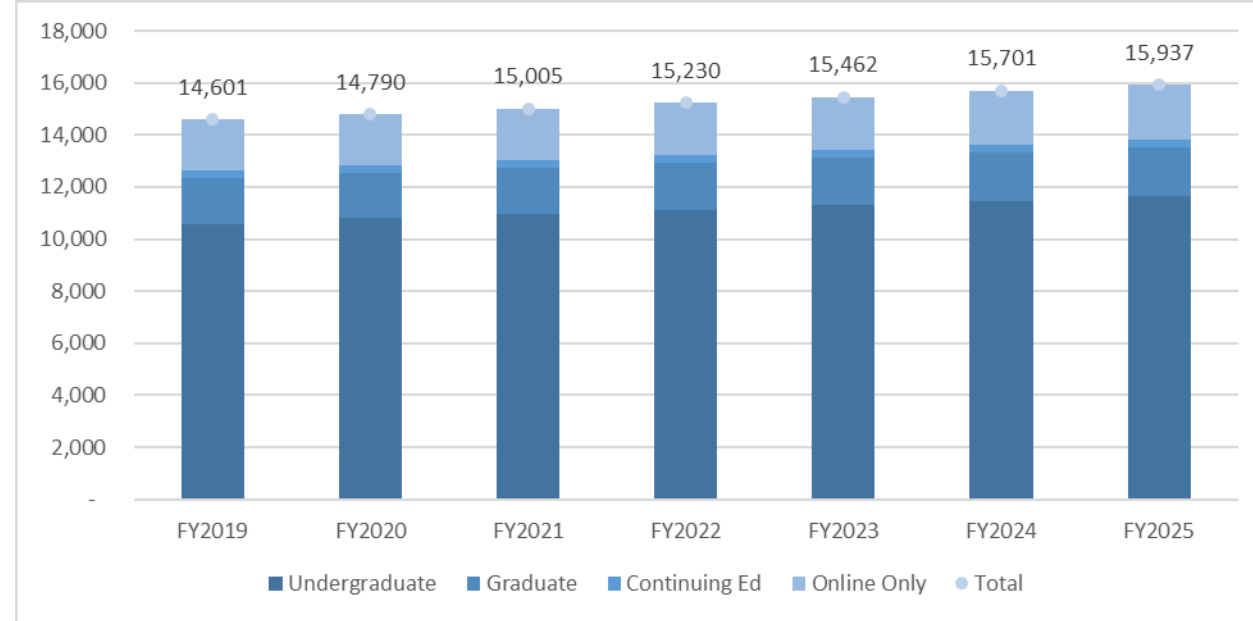
Lowell: Enrollment by New v Continuing



LOWELL	Actual				Forecast		
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Undergraduate (FTEs)							
New	3,029	3,223	3,270	3,319	3,370	3,422	3,473
% Change	5.0%	6.4%	1.5%	1.5%	1.5%	1.5%	1.5%
Continuing	7,526	7,569	7,679	7,794	7,913	8,035	8,156
% Change	2.3%	0.6%	1.5%	1.5%	1.5%	1.5%	1.5%
Undergraduate Total	10,555	10,792	10,949	11,113	11,282	11,457	11,629
% Change	3.1%	2.2%	1.5%	1.5%	1.5%	1.5%	1.5%

Source: Actuals from student profile.

Lowell: Enrollment by Career



LOWELL Students (FTEs)	Actual				Forecast		
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Undergraduate	10,555	10,792	10,949	11,113	11,282	11,457	11,629
% Change	3.1%	2.2%	1.5%	1.5%	1.5%	1.5%	1.5%
Graduate	1,804	1,761	1,787	1,814	1,841	1,870	1,898
% Change	0.6%	-2.4%	1.4%	1.5%	1.5%	1.5%	1.5%
Continuing Ed	285	274	278	282	286	291	295
Online Only	1,957	1,963	1,991	2,021	2,052	2,084	2,115
% Change	-6.2%	-0.2%	1.4%	1.5%	1.5%	1.5%	1.5%
Total	14,601	14,790	15,005	15,230	15,462	15,701	15,937
% Change	1.2%	1.3%	1.5%	1.5%	1.5%	1.5%	1.5%

Source: Actuals from student profile.

Lowell: Staffing

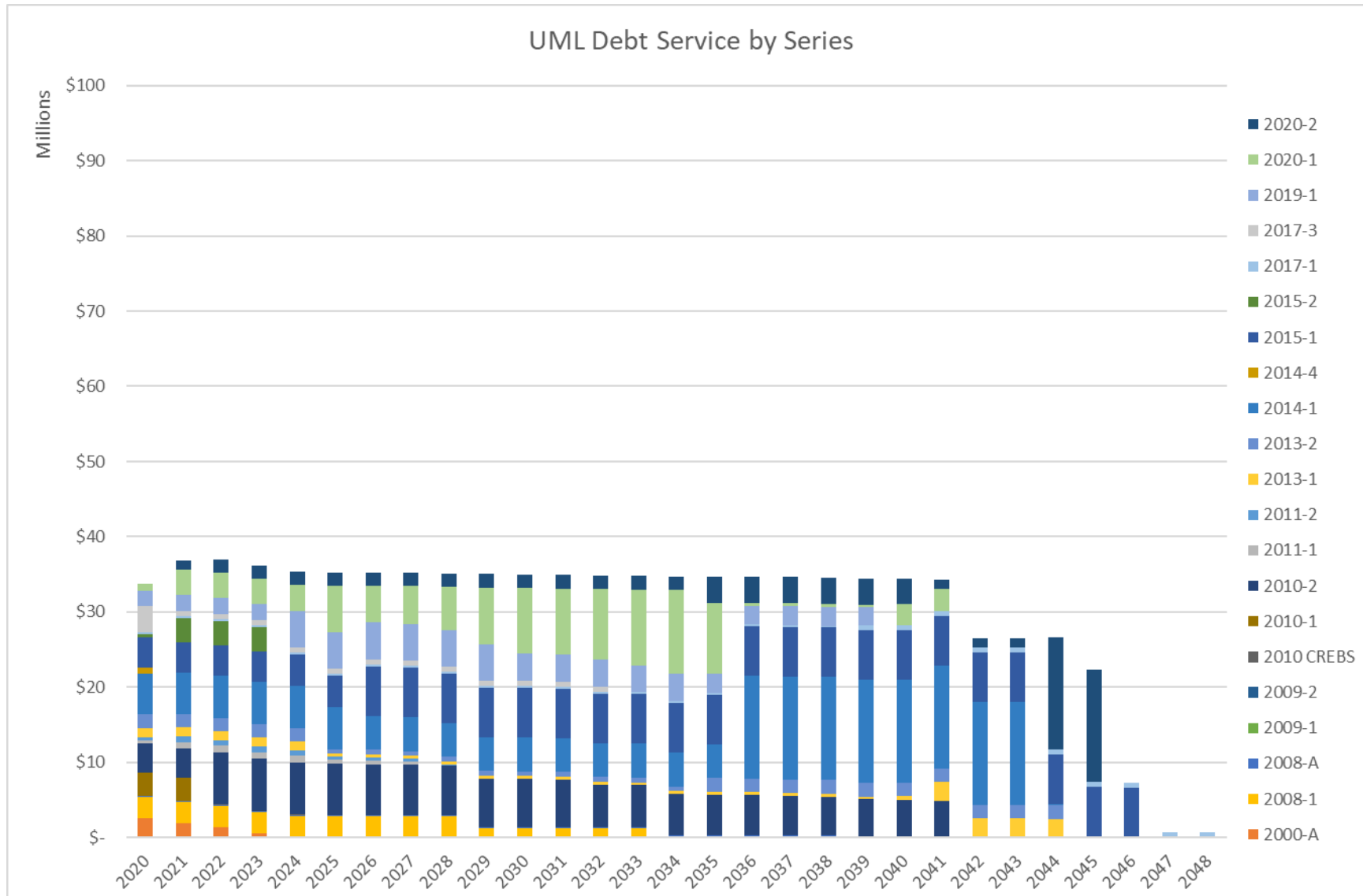
Employee FTEs	LOWELL									
	Actual			Budget	Actual	Forecast				
	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Restricted										
Faculty	8	10	11	9	15	10	11	12	13	14
Staff	78	82	95	98	87	100	101	103	104	106
Total Restricted	86	92	106	107	102	110	112	115	117	120
<i>FTE Change (#)</i>		6	14	1	(4)	3	2	3	2	3
Unrestricted General University Ops										
Faculty	775	797	805	849	838	853	853	853	867	870
Staff	966	985	974	1,032	988	1,033	1,033	1,033	1,038	1,039
Total General University Ops	1,741	1,782	1,779	1,881	1,826	1,886	1,886	1,886	1,905	1,909
<i>FTE Change (#)</i>		42	(3)	102	47	5	-	-	19	4
Unrestricted Aux./Independent Business										
Faculty	-	-	-	-	-	-	-	-	-	-
Staff	38	38	75	76	71	76	76	76	76	76
Total Aux./Independent Business	38	38	75	76	71	76	76	76	76	76
<i>FTE Change (#)</i>		-	37	1	(4)	-	-	-	-	-
Total Faculty & Staff	1,865	1,912	1,960	2,064	1,999	2,072	2,074	2,077	2,098	2,105
		2.5%	2.5%	5.3%	2.0%	0.4%	0.1%	0.1%	1.0%	0.3%

Lowell: Staffing Ratios

	LOWELL									
	Actual			Budget	Actual	Forecast				
	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
<i>Student - Faculty</i>										
Student (FTE)	13,910	14,423	14,601	14,862	14,790	15,005	15,230	15,462	15,701	15,937
Faculty (FTE)	783	807	816	858	853	863	864	865	880	884
Student-Faculty Ratio	17.8	17.9	17.9	17.3	17.3	17.4	17.6	17.9	17.8	18.0
<i>Staff - Faculty (All)</i>										
Staff (FTE)	1,082	1,105	1,144	1,206	1,146	1,209	1,210	1,212	1,218	1,221
Faculty (FTE)	783	807	816	858	853	863	864	865	880	884
Staff-Faculty Ratio	1.4	1.4	1.4	1.4	1.3	1.4	1.4	1.4	1.4	1.4
<i>Staff - Faculty (E&G)</i>										
Staff (FTE)	966	985	974	1,032	988	1,033	1,033	1,033	1,038	1,039
Faculty (FTE)	775	797	805	849	838	853	853	853	867	870
Staff-Faculty Ratio (E&G)	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2

Lowell: Key Ratios

Key Ratio	LOWELL										
	Actual					Budget	Forecast				
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Operating Margin (%)	0.8%	0.2%	2.2%	1.5%	1.3%	0.6%	1.0%	1.5%	2.0%	2.0%	2.0%
<i>Operating Margin (\$)</i>	2,928	696	9,424	6,785	6,134	2,776	4,927	8,085	11,060	11,838	11,949
Operating Cash Flow Margin (%)	13.3%	12.8%	14.6%	14.3%	14.7%	13.7%	14.7%	15.0%	15.0%	15.0%	15.1%
<i>Operating Cash Flow Margin (\$)</i>	50,613	51,839	62,350	64,009	69,460	66,816	74,503	78,886	81,771	84,723	88,616
Debt Service Burden (%)	7.6%	7.5%	7.3%	7.4%	7.3%	7.5%	8.2%	7.8%	7.4%	7.1%	6.4%
Debt Service Coverage (x)	1.7	1.7	2.0	1.9	2.0	1.8	1.8	1.9	2.0	2.1	2.4
Financial Leverage (x)	0.26	0.28	0.26	0.25	0.24	0.25	0.27	0.30	0.32	0.34	0.38
Total Debt (\$ in thousands)	496,624	491,078	487,253	500,656	556,087	526,339	509,547	492,534	475,694	458,742	443,807
Spendable Cash & Investments to Op Expenses (x)	0.34	0.34	0.31	0.29	0.29	0.27	0.28	0.29	0.28	0.28	0.29
Enrollment	13,369	13,620	13,910	14,423	14,601	14,862	15,005	15,230	15,462	15,701	15,937
<i>Enrollment (% Change)</i>	2.6%	1.9%	2.1%	3.7%	1.2%	1.8%	1.5%	1.5%	1.5%	1.5%	1.5%



2020 Refunding results are preliminary and subject to market volatility.

Medical School

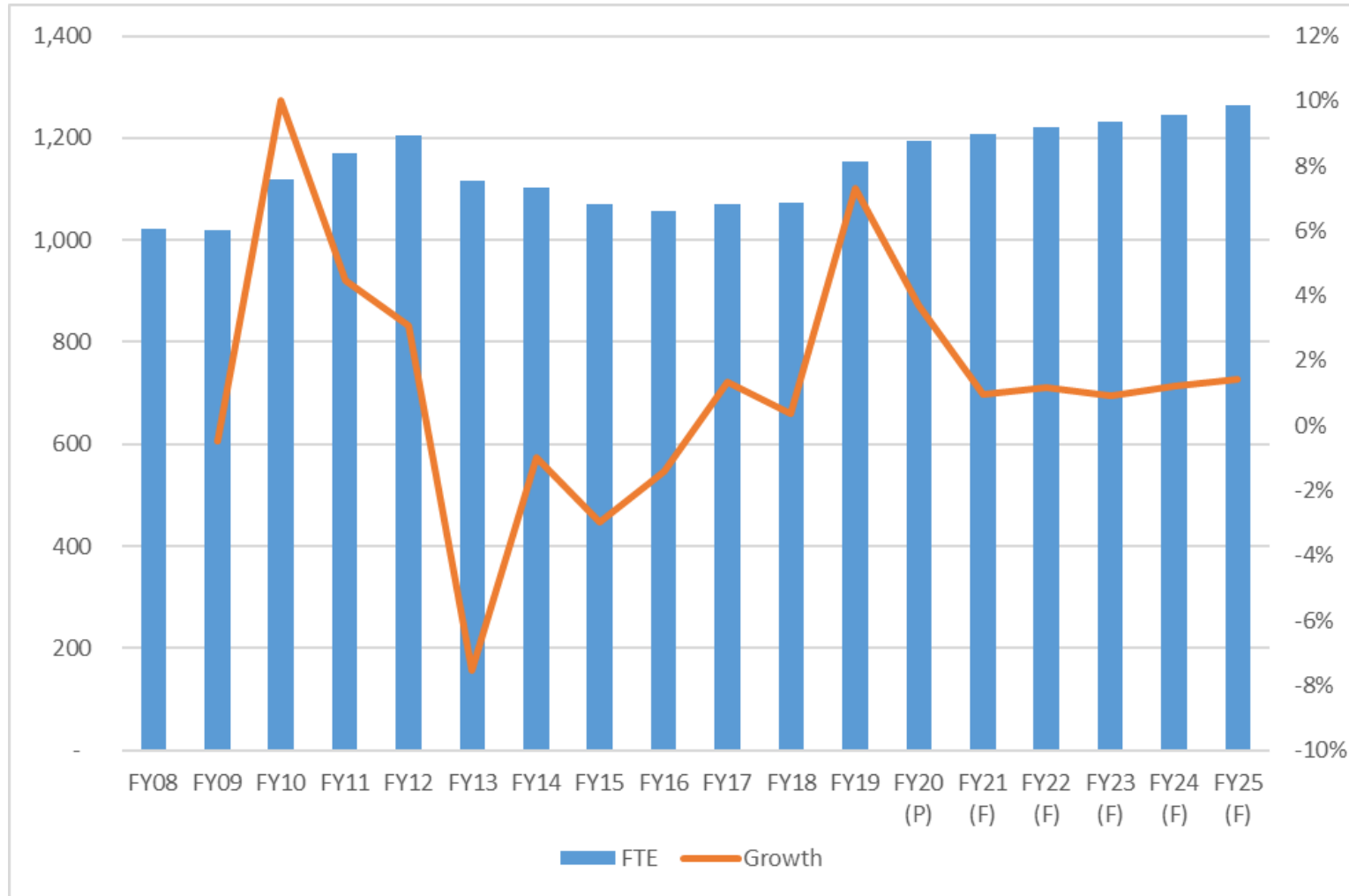
Medical: Revenue & Expenses

(\$ in Thousands)

MEDICAL SCHOOL

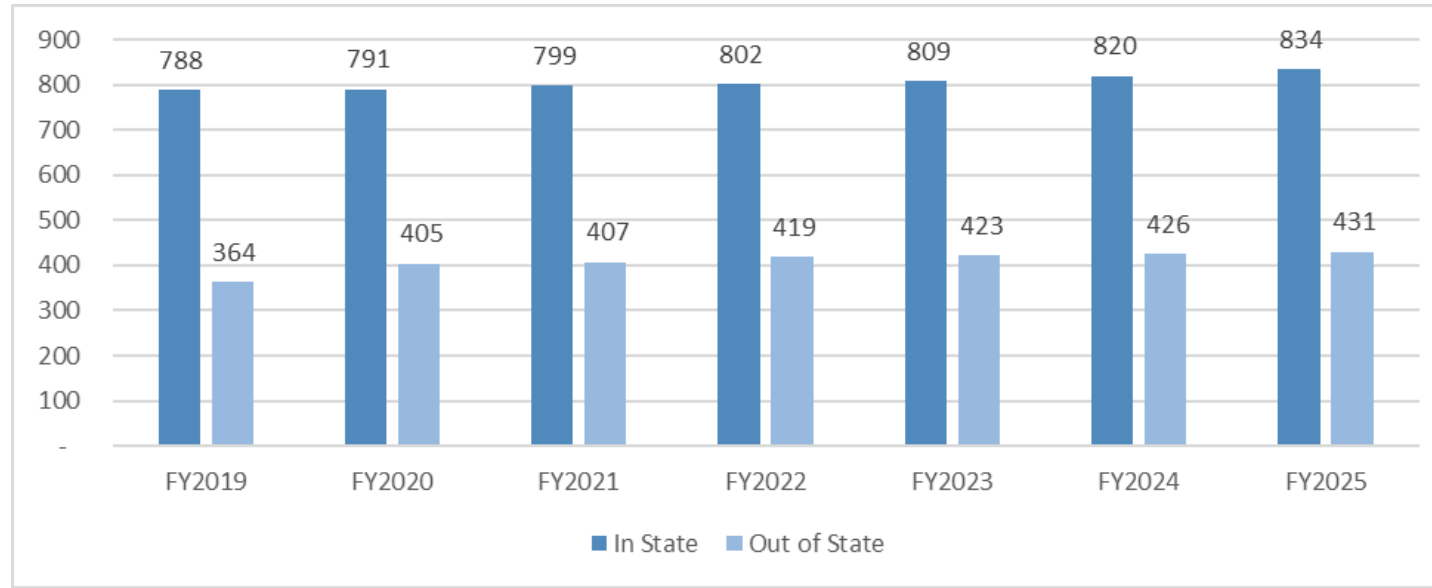
Revenues	Actual					Budget	Q1 Projection	Forecast					% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
Gross Tuition & Fees	18,929	20,881	24,206	28,609	34,681	36,971	36,971	38,012	39,115	40,744	43,408	46,515	22.4%	5.2%
Tuition Discounts	(2,060)	(2,269)	(2,751)	(3,320)	(4,235)	(4,764)	(4,764)	(4,898)	(4,986)	(4,989)	(5,063)	(5,139)	4.9%	1.2%
Discount Rate	10.9%	10.9%	11.4%	11.6%	12.2%	12.9%	12.9%	12.9%	12.7%	12.2%	11.7%	11.0%	-14.3%	-3.8%
Net Tuition & Fees	16,869	18,612	21,455	25,289	30,446	32,207	32,207	33,114	34,128	35,756	38,345	41,376	25.0%	5.7%
Grants	254,296	258,499	275,662	269,721	286,603	267,487	267,487	281,593	295,424	311,320	327,474	343,896	22.1%	5.1%
Sales & Service, Educational	10,261	12,443	12,790	14,023	15,023	12,454	12,454	12,828	13,149	13,477	13,814	14,160	10.4%	2.5%
Auxiliary Enterprises	29,099	29,271	29,626	30,797	31,561	33,826	33,826	34,151	35,005	35,880	36,777	37,696	10.4%	2.5%
Other Operating	91,425	258,246	190,611	268,909	183,269	181,547	181,547	182,279	195,251	210,332	225,477	221,578	21.6%	5.1%
State appropriations	45,843	50,634	52,250	54,560	57,959	56,086	56,086	57,677	58,810	59,966	61,144	62,346	8.1%	2.0%
Other NonOperating	14,224	5,699	37,945	27,800	32,008	26,608	26,608	30,872	31,435	31,845	33,235	33,955	10.0%	2.4%
Independent Business Lines	312,077	330,259	371,618	274,555	266,509	301,131	301,131	297,454	303,877	310,498	318,321	326,854	9.9%	2.4%
Total Revenues	774,094	963,663	991,957	965,654	903,378	911,346	911,346	929,968	967,079	1,009,073	1,054,586	1,081,861	16.3%	3.9%
% Growth	-17.4%	24.5%	2.9%	-2.7%	-6.4%	0.9%	0.9%	2.0%	4.0%	4.3%	4.5%	2.6%		
Expenses	Actual					Budget	Q1 Projection	Forecast					% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
Salaries & Fringe	383,248	407,159	407,304	416,112	433,752	423,153	423,153	454,383	473,947	494,202	512,538	528,360	16.3%	3.8%
Non-personnel	331,473	484,916	439,960	435,266	343,729	383,441	383,441	369,347	384,735	399,085	415,708	427,410	15.7%	3.7%
Scholarships and fellowships	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Depreciation	63,166	65,133	64,801	65,013	64,722	63,889	63,889	63,520	64,688	69,438	73,022	73,022	15.0%	3.6%
Interest	34,009	30,658	30,067	26,753	24,830	19,420	19,420	19,434	21,246	24,397	30,646	29,660	52.6%	11.6%
Total Expenses	811,896	987,866	942,132	943,144	867,033	889,903	889,903	906,684	944,616	987,123	1,031,914	1,058,451	16.7%	3.9%
% Growth	-14.5%	21.7%	-4.6%	0.1%	-8.1%	2.6%	2.6%	1.9%	4.2%	4.5%	4.5%	2.6%		
Operating Margin	Actual					Budget	Q1 Projection	Forecast					% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
UMass OM Calc Revenues	779,282	977,267	972,803	964,299	898,882	907,996	907,996	928,008	965,082	1,007,043	1,052,502	1,079,736	16.3%	3.9%
Total Expenses	811,896	987,866	942,132	943,144	867,033	889,903	889,903	906,684	944,616	987,123	1,031,914	1,058,451	16.7%	3.9%
Surplus / (Deficit)	(32,614)	(10,599)	30,671	21,155	31,849	18,093	18,093	21,324	20,466	19,920	20,588	21,285	-0.2%	0.0%
UMass OM Calc	-4.2%	-1.1%	3.2%	2.2%	3.5%	2.0%	2.0%	2.3%	2.1%	2.0%	2.0%	2.0%		

Medical: Enrollment Trend



Source: Actuals from student profile.

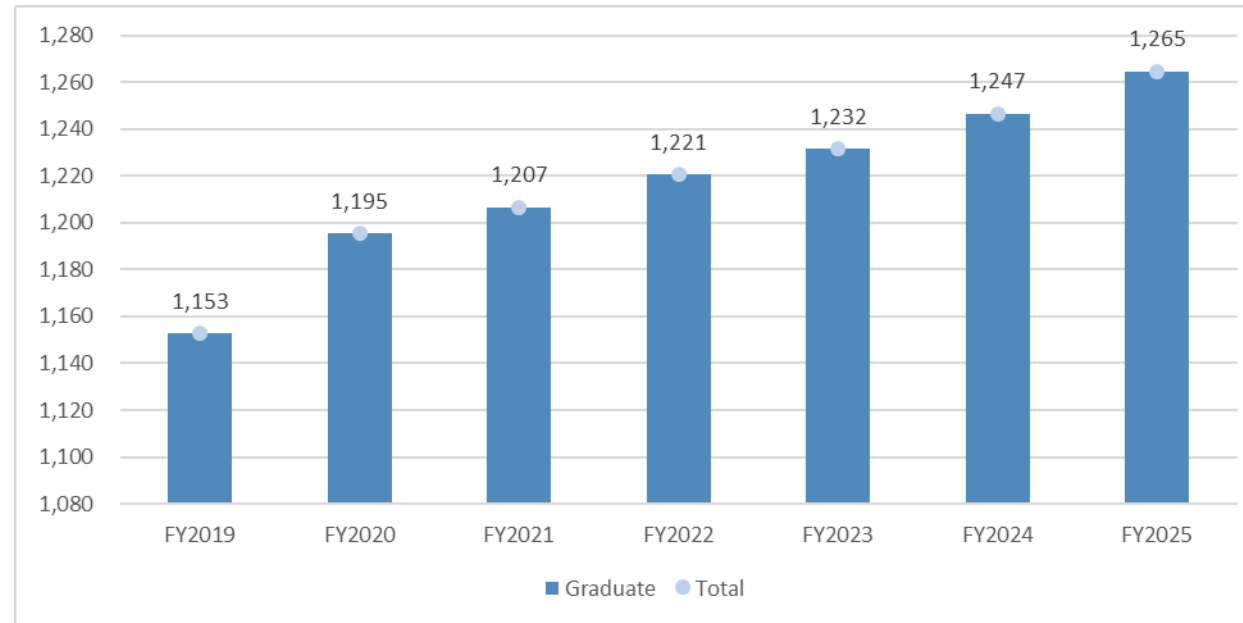
Medical: Enrollment by Residency



Medical Students (FTEs)	Actual				Forecast		
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
In State	788	791	799	802	809	820	834
% Change	2.6%	0.3%	1.1%	0.3%	0.9%	1.4%	1.7%
Out of State	364	405	407	419	423	426	431
% Change	19.1%	11.0%	0.7%	2.9%	0.9%	0.9%	1.0%
Total	1,153	1,195	1,207	1,221	1,232	1,247	1,265
% Change	7.3%	3.7%	0.9%	1.2%	0.9%	1.2%	1.4%

Source: Actuals from student profile.

Medical: Enrollment by Career



Medical Students (FTEs)	Actual				Forecast		
	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Graduate	1,153	1,195	1,207	1,221	1,232	1,247	1,265
% Change	7.3%	3.7%	0.9%	1.2%	0.9%	1.2%	1.4%
Total	1,153	1,195	1,207	1,221	1,232	1,247	1,265
% Change	7.3%	3.7%	0.9%	1.2%	0.9%	1.2%	1.4%

Source: Actuals from student profile.

Medical: Staffing

Employee FTEs	MEDICAL SCHOOL									
	Actual			Budget	Actual	Forecast				
	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Restricted										
Faculty	174	242	246	242	242	246	252	260	268	275
Staff	687	890	879	890	890	904	928	957	985	1,012
Total Restricted	861	1,132	1,125	1,132	1,132	1,150	1,180	1,217	1,253	1,287
<i>FTE Change (#)</i>		270	(7)	7	7	18	30	37	36	34
Unrestricted General University Ops										
Faculty	218	215	209	225	225	227	234	240	246	252
Staff	1,020	1,017	1,021	1,028	1,028	1,038	1,069	1,096	1,125	1,153
Total General University Ops	1,238	1,232	1,231	1,253	1,253	1,265	1,303	1,336	1,371	1,405
<i>FTE Change (#)</i>		(6)	(1)	22	22	12	38	33	35	34
Unrestricted Aux./Independent Business										
Faculty	18	13	11	13	13	13	13	13	13	13
Staff	1,327	1,278	1,310	1,278	1,278	1,279	1,280	1,282	1,283	1,284
Total Aux./Independent Business	1,345	1,291	1,321	1,291	1,291	1,292	1,293	1,295	1,296	1,297
<i>FTE Change (#)</i>		(54)	30	(30)	(30)	1	1	2	1	1
Total Faculty & Staff	3,444	3,655	3,676	3,975	3,676	4,009	4,084	4,162	4,240	4,314
		6.1%	0.6%	8.1%	0.0%	0.9%	1.9%	1.9%	1.9%	1.7%

Medical: Staffing Ratios

MEDICAL SCHOOL

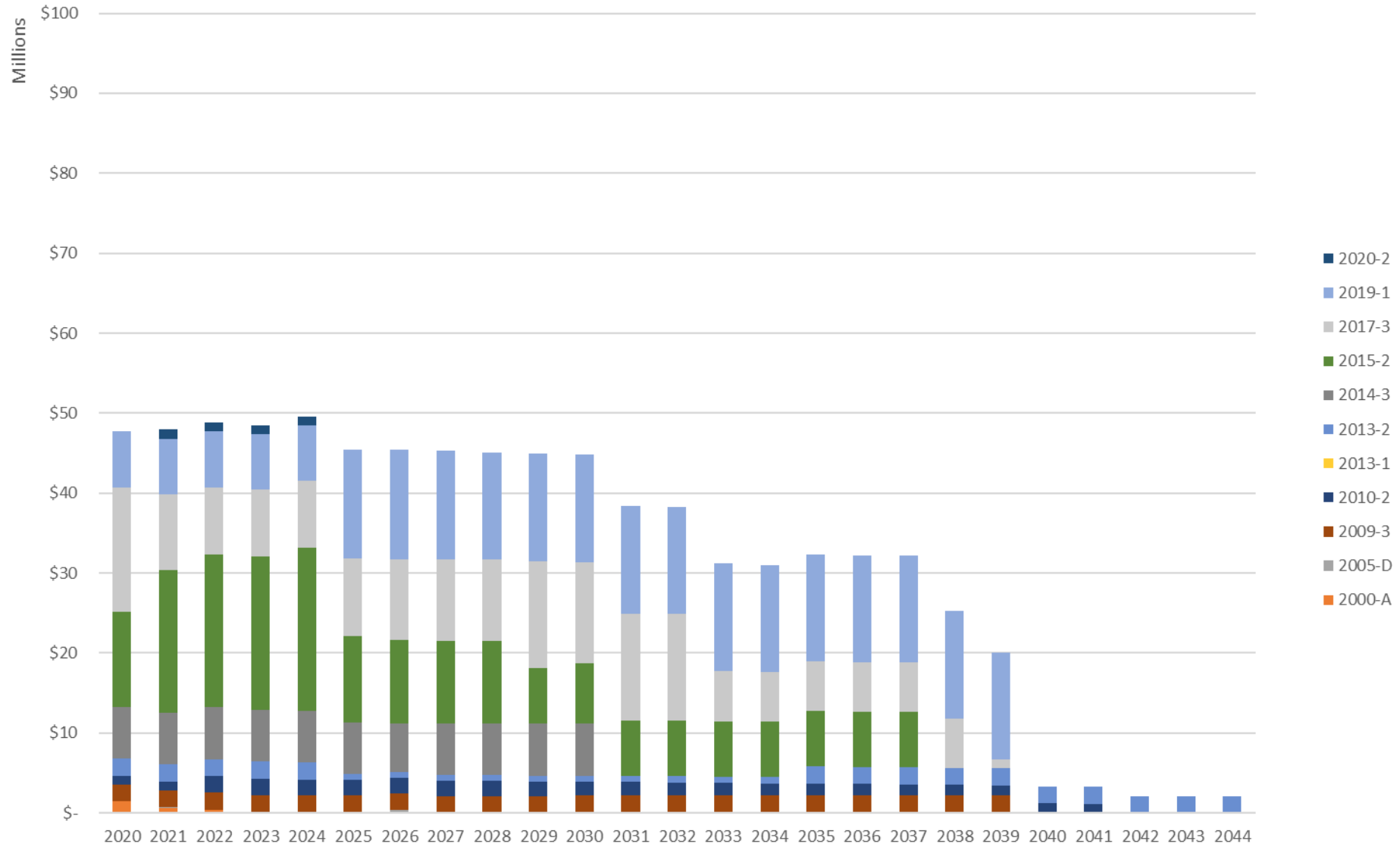
	Actual			Budget	Actual	Forecast				
	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
<i>Student - Faculty</i>										
Student (FTE)	1,070	1,074	1,153	1,203	1,195	1,207	1,221	1,232	1,247	1,265
Faculty (FTE)	410	470	466	480	480	486	499	513	527	540
Student-Faculty Ratio	2.6	2.3	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.3
<i>Staff - Faculty (All)</i>										
Staff (FTE)	3,034	3,185	3,210	3,196	3,196	3,221	3,277	3,335	3,393	3,449
Faculty (FTE)	410	470	466	480	480	486	499	513	527	540
Staff-Faculty Ratio	7.4	6.8	6.9	6.7	6.7	6.6	6.6	6.5	6.4	6.4
<i>Staff - Faculty (E&G)</i>										
Staff (FTE)	1,020	1,017	1,021	1,028	1,028	1,038	1,069	1,096	1,125	1,153
Faculty (FTE)	218	215	209	225	225	227	234	240	246	252
Staff-Faculty Ratio (E&G)	4.7	4.7	4.9	4.6	4.6	4.6	4.6	4.6	4.6	4.6

Medical: Key Ratios

Key Ratio	MEDICAL SCHOOL										
	Actual					Budget	Forecast				
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Operating Margin (%)	-4.2%	-1.1%	3.2%	2.2%	3.5%	2.0%	2.3%	2.1%	2.0%	2.0%	2.0%
Operating Margin (\$)	(32,614)	(10,599)	30,671	21,155	31,849	18,093	21,324	20,466	19,920	20,588	21,285
Operating Cash Flow Margin (%)	8.4%	8.7%	12.8%	11.5%	13.7%	11.6%	11.6%	11.4%	11.6%	12.1%	11.8%
Operating Cash Flow Margin (\$)	65,287	85,444	124,814	110,201	123,144	105,727	107,821	110,060	117,722	127,905	127,574
Debt Service Burden (%)	6.2%	5.2%	6.0%	5.1%	5.5%	5.6%	4.7%	4.9%	5.2%	6.2%	5.7%
Annual Debt Service Coverage (x)	1.3	1.7	2.2	2.3	2.6	2.1	2.5	2.4	2.3	2.0	2.1
Financial Leverage (x)	0.38	0.34	0.42	0.64	0.72	0.74	0.79	0.75	0.64	0.68	0.73
Total Debt (\$ in thousands)	706,615	684,484	661,505	636,468	607,744	608,483	561,240	603,272	727,294	694,308	664,144
Spendable Cash & Investments to Op Expenses (x)	0.33	0.23	0.30	0.43	0.50	0.50	0.49	0.48	0.47	0.46	0.46
Enrollment	1,071	1,056	1,070	1,074	1,153	1,203	1,207	1,221	1,232	1,247	1,265
Enrollment (% Change)	-3.0%	-1.4%	1.3%	0.4%	7.3%	4.4%	0.9%	1.2%	0.9%	1.2%	1.4%

Includes new borrowing in FY22 & FY23

UMMS Debt Service by Series



President's Office

President's Office: Revenue & Expenses

(\$ in Thousands)

CENTRAL

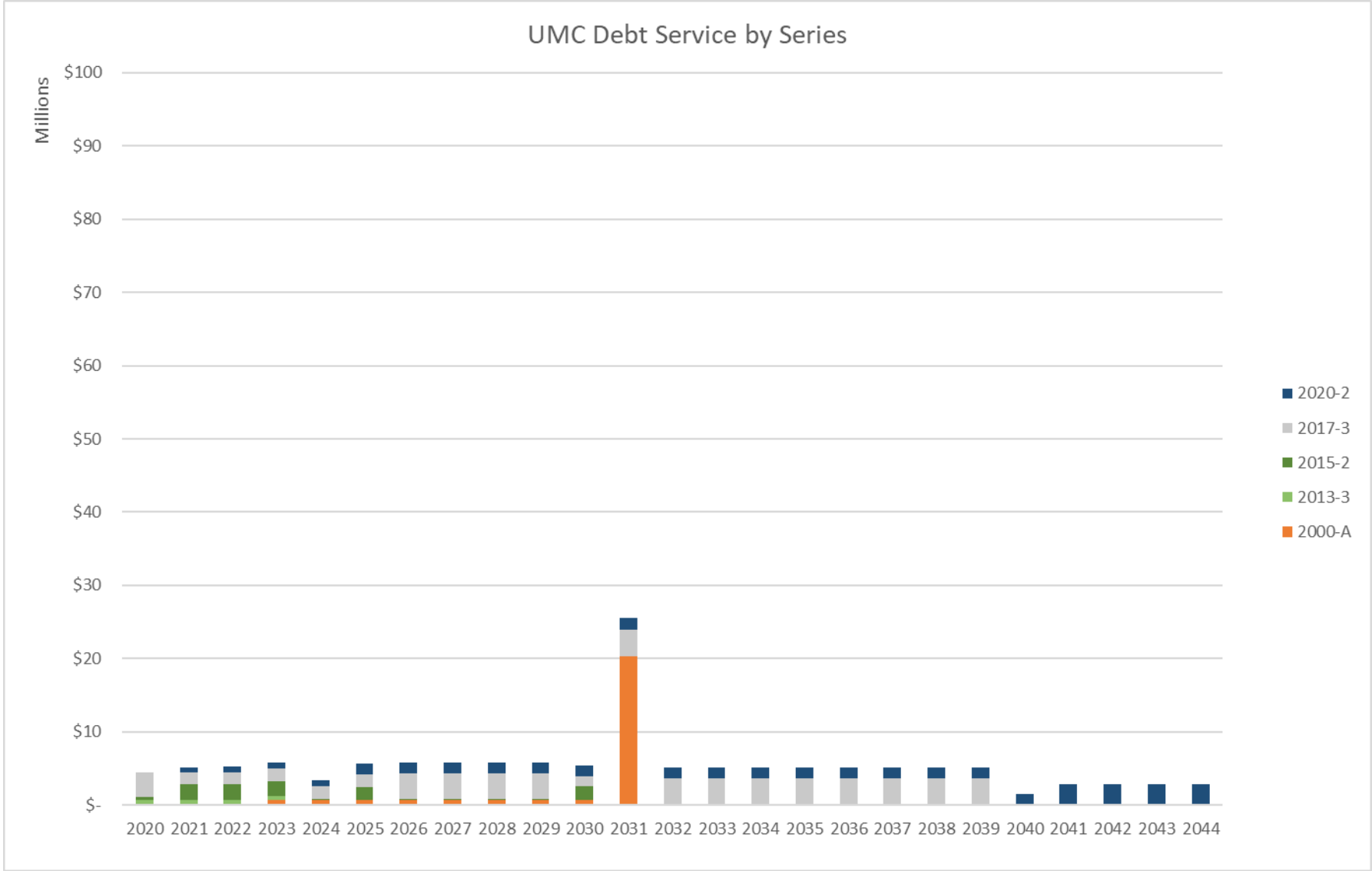
Revenues	Actual					Budget	Q1 Projection	Forecast					% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
Gross Tuition & Fees	4,701	5,204	6,461	6,144	6,802	6,818	6,818	6,954	7,093	7,235	7,380	7,528	8.3%	2.0%
Tuition Discounts	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Discount Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-	-
Net Tuition & Fees	4,701	5,204	6,461	6,144	6,802	6,818	6,818	6,954	7,093	7,235	7,380	7,528	8.3%	2.0%
Grants	11,358	13,848	18,644	20,651	20,019	24,579	24,579	25,034	25,499	25,973	26,456	26,949	7.6%	1.8%
Sales & Service, Educational	2,129	2,253	2,192	2,154	3,255	1,863	803	803	803	803	803	803	-	0.0%
Auxiliary Enterprises	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Operating	76,489	78,416	80,649	83,159	80,662	90,559	90,169	94,182	96,000	97,855	99,748	101,678	8.0%	1.9%
State appropriations		890	704	160	636	365	365	-	-	-	-	-	-	-
Other NonOperating	5,166	7,010	9,009	6,951	13,104	8,342	10,619	11,656	11,724	11,793	11,863	11,933	2.4%	0.6%
Total Revenues	99,843	107,621	117,659	119,219	124,478	132,526	133,353	138,629	141,119	143,659	146,250	148,891	7.4%	1.8%
% Growth	-1.9%	7.8%	9.3%	1.3%	4.4%	6.5%	7.1%	4.6%	1.8%	1.8%	1.8%	1.8%		
Expenses	Actual					Budget	Q1 Projection	Forecast					% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
Salaries & Fringe	52,240	56,575	60,838	60,023	60,409	69,546	69,975	75,831	78,488	81,221	84,033	86,925	14.6%	3.4%
Non-personnel	36,812	35,026	34,936	40,025	45,385	54,806	54,969	52,898	52,404	52,160	51,886	51,582	-2.5%	-0.6%
Scholarships and fellowships	6	6	25	-	-	-	-	-	-	-	-	-	-	-
Depreciation	6,534	9,240	9,439	3,719	3,008	3,733	2,608	2,608	2,608	2,608	2,608	2,608	0.0%	0.0%
Interest	1,747	3,897	3,700	3,009	3,161	1,759	3,161	3,161	3,161	3,161	3,161	3,161	0.0%	0.0%
Total Expenses	97,339	104,744	108,938	106,776	111,963	129,844	130,713	134,498	136,661	139,150	141,688	144,276	7.3%	1.7%
% Growth	12.2%	7.6%	4.0%	-2.0%	4.9%	16.0%	16.7%	3.6%	1.6%	1.8%	1.8%	1.8%		
Operating Margin	Actual					Budget	Q1 Projection	Forecast					% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
UMass OM Calc Revenues	95,924	105,446	116,408	119,219	122,841	132,526	133,353	136,992	139,482	142,022	144,613	147,254	7.5%	1.8%
Total Expenses	97,339	104,744	108,938	106,776	111,963	129,844	130,713	134,498	136,661	139,150	141,688	144,276	7.3%	1.7%
Surplus / (Deficit)	(1,415)	702	7,470	12,443	10,878	2,682	2,640	2,494	2,821	2,872	2,925	2,978	19.4%	4.2%
UMass OM Calc	-1.5%	0.7%	6.4%	10.4%	8.9%	2.0%	2.0%	1.8%	2.0%	2.0%	2.0%	2.0%		

President's Office: Staffing

Employee FTEs	CENTRAL									
	Actual			Budget	Actual	Forecast				
	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Restricted										
Faculty	-	-	-	-	-	-	-	-	-	-
Staff	89	87	81	114	88	98	99	99	100	100
Total Restricted	89	87	81	114	88	98	99	99	100	100
<i>FTE Change (#)</i>		(2)	(8)	33	7	(16)	0	0	0	0
Unrestricted General University Ops										
Faculty	-	-	-	-	-	-	-	-	-	-
Staff	295	305	327	322	297	378	380	382	383	385
Total General University Ops	295	305	327	322	297	378	380	382	383	385
<i>FTE Change (#)</i>		10	22	(5)	(30)	56	2	2	2	2
Unrestricted Aux./Independent Business										
Faculty	-	-	-	-	-	-	-	-	-	-
Staff	-	-	-	-	-	-	-	-	-	-
Total Aux./Independent Business	-	-	-	-	-	-	-	-	-	-
<i>FTE Change (#)</i>		-	-	-	-	-	-	-	-	-
Total Faculty & Staff	384	392	408	436	385	477	479	481	483	485
		2.1%	4.1%	6.9%	-5.6%	9.3%	0.4%	0.4%	0.4%	0.4%

President's Office: Key Ratios

Key Ratio	CENTRAL										
	Actual					Budget	Forecast				
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Operating Margin (%)	-1.5%	0.7%	6.4%	10.4%	8.9%	2.0%	1.8%	2.0%	2.0%	2.0%	2.0%
<i>Operating Margin (\$)</i>	<i>(1,415)</i>	702	7,470	12,443	10,878	2,682	2,494	2,821	2,872	2,925	2,978
Operating Cash Flow Margin (%)	13.6%	16.4%	18.2%	17.5%	12.0%	7.0%	6.5%	6.9%	6.8%	7.0%	7.0%
<i>Operating Cash Flow Margin (\$)</i>	<i>14,034</i>	<i>17,916</i>	<i>21,256</i>	<i>21,177</i>	<i>14,473</i>	<i>9,340</i>	<i>8,920</i>	<i>9,702</i>	<i>9,800</i>	<i>10,295</i>	<i>10,397</i>
Debt Service Burden (%)	3.1%	3.7%	3.4%	2.8%	4.5%	3.9%	3.9%	3.9%	4.1%	2.7%	3.7%
Debt Service Coverage (x)	4.7	4.6	5.7	7.0	2.8	1.9	1.7	1.8	1.7	2.7	1.9
Financial Leverage (x)	2.13	1.95	2.35	2.46	2.72	2.64	3.21	3.34	3.48	3.54	3.69
Total Debt (\$ in thousands)	83,485	77,374	80,445	84,734	86,615	80,799	74,805	72,575	70,235	69,725	67,585
Spendable Cash & Investments to Op Expenses (x)	1.83	1.44	1.74	1.95	2.10	1.64	1.78	1.77	1.76	1.74	1.73



University

University: Revenue & Expenses

(\$ in Thousands)

UNIVERSITY

Revenues			Actual			Budget	Q1 Projection		Forecast				% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020 (B)	FY2020 (P)	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
Gross Tuition & Fees	987,384	1,070,841	1,136,540	1,185,826	1,223,734	1,263,315	1,262,676	1,307,381	1,361,103	1,413,455	1,465,157	1,518,067	16.1%	3.8%
Tuition Discounts	(222,164)	(244,025)	(288,708)	(311,947)	(328,830)	(342,748)	(347,148)	(360,961)	(376,071)	(387,908)	(400,549)	(413,262)	14.5%	3.4%
Discount Rate	22.5%	22.8%	25.4%	26.3%	26.9%	27.1%	27.5%	27.6%	27.6%	27.4%	27.3%	27.2%	-1.4%	-0.4%
Net Tuition & Fees	765,220	826,816	847,832	874,825	894,904	920,567	915,528	946,420	977,945	1,018,318	1,057,235	1,097,284	15.9%	3.8%
Grants	510,741	528,352	560,081	560,990	593,086	579,454	589,007	613,084	636,421	662,182	688,569	715,608	16.7%	3.9%
Sales & Service, Educational	25,601	27,500	28,910	30,591	34,984	29,350	30,278	30,912	31,624	32,356	33,107	33,881	9.6%	2.3%
Auxiliary Enterprises	362,193	383,281	400,822	416,733	441,795	456,696	459,456	471,807	489,646	505,098	520,315	535,895	13.6%	3.2%
Other Operating	136,954	307,286	233,717	311,119	222,076	236,776	233,070	238,197	254,518	271,021	287,598	285,151	19.7%	4.7%
State appropriations	621,200	669,748	720,817	751,894	780,222	805,515	801,974	829,659	857,827	886,723	915,316	945,042	13.9%	3.3%
Other NonOperating	147,801	162,741	195,089	197,142	231,504	199,096	211,578	217,880	224,548	230,165	236,408	241,025	10.6%	2.6%
Independent Business	312,077	330,259	371,618	274,555	266,509	301,131	301,131	297,454	303,877	310,498	318,321	326,854	9.9%	2.4%
Total Revenues	2,881,786	3,235,982	3,358,886	3,417,849	3,465,080	3,528,585	3,542,022	3,645,415	3,776,406	3,916,361	4,056,869	4,180,740	14.7%	3.5%
% Growth	-3.8%	12.3%	3.8%	1.8%	1.4%	1.8%	2.2%	3.3%	3.6%	3.7%	3.6%	3.1%		
Expenses			Actual			Budget	Q1 Projection		Forecast				% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
Salaries & Fringe	1,659,054	1,788,018	1,847,346	1,901,896	1,970,869	2,011,769	2,018,601	2,109,281	2,184,193	2,263,414	2,345,706	2,423,434	14.9%	3.5%
Non-personnel	852,900	1,067,226	1,018,600	1,088,019	943,685	1,013,968	1,015,870	990,945	1,024,201	1,061,045	1,099,025	1,126,143	13.6%	3.3%
Scholarships and fellowships	49,300	44,645	47,706	50,402	49,507	52,996	53,990	55,088	56,348	57,579	58,896	60,207	9.3%	2.2%
Depreciation	221,043	240,864	249,669	261,417	276,638	286,093	287,345	295,573	306,317	318,498	332,277	339,966	15.0%	3.6%
Interest	100,332	105,276	110,069	115,851	116,217	119,112	118,876	129,992	131,071	131,014	134,017	142,197	9.4%	2.3%
Removing GASB	57	(34,466)	(36,040)	(81,325)	-	-	-	-	-	-	-	-	0.0%	-
Total Expenses	2,882,686	3,211,563	3,237,351	3,336,260	3,356,916	3,483,937	3,494,682	3,580,879	3,702,131	3,831,550	3,969,922	4,091,946	14.3%	3.4%
% Growth	-0.6%	11.4%	0.8%	3.1%	0.6%	3.8%	4.1%	2.8%	3.4%	3.5%	3.6%	3.1%		
Operating Margin			Actual			Budget	Q1 Projection		Forecast				% Change FY21-25	
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Cumulative	Avg. Annual
UMass OM Calc Revenues	2,885,171	3,252,580	3,326,336	3,416,188	3,449,697	3,522,225	3,536,483	3,641,663	3,773,228	3,912,787	4,052,860	4,176,162	14.7%	3.5%
Total Expenses	2,882,686	3,211,563	3,237,351	3,336,260	3,356,916	3,483,937	3,494,682	3,580,879	3,702,131	3,831,550	3,969,922	4,091,946	14.3%	3.4%
Surplus / (Deficit)	2,485	41,017	88,985	79,928	92,781	38,288	41,801	60,783	71,097	81,237	82,938	84,216	38.6%	8.7%
UMass OM Calc	0.1%	1.3%	2.7%	2.3%	2.7%	1.1%	1.2%	1.7%	1.9%	2.1%	2.0%	2.0%		

University: Key Ratios

Key Ratio	UNIVERSITY										
	Actual					Budget	Forecast				
	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Operating Margin (%)	0.1%	1.3%	2.7%	2.3%	2.7%	1.1%	1.7%	1.9%	2.1%	2.0%	2.0%
Operating Margin (\$)	2,485	41,017	88,985	79,928	92,781	38,288	60,783	71,097	81,237	82,938	84,216
Operating Cash Flow Margin (%)	11.8%	12.0%	13.7%	13.3%	14.0%	14.8%	15.3%	15.4%	15.5%	15.5%	15.6%
Operating Cash Flow Margin (\$)	336,418	385,596	447,796	444,352	475,586	526,078	560,354	582,963	609,392	633,383	655,307
Debt Service Burden (%)	6.6%	6.2%	6.6%	6.5%	6.6%	6.8%	6.9%	6.5%	6.4%	6.5%	6.2%
Debt Service Coverage (x)	1.8	1.9	2.1	2.1	2.1	2.2	2.3	2.4	2.5	2.5	2.6
Financial Leverage (x)	0.42	0.39	0.41	0.47	0.48	0.39	0.50	0.57	0.57	0.57	0.61
Total Debt (\$ in thousands)	2,954,159	2,860,910	3,055,930	3,065,672	3,308,237	3,743,451	3,254,351	3,193,751	3,229,350	3,354,333	3,238,527
Spendable Cash & Investments to Op Expenses (x)	0.43	0.35	0.40	0.44	0.48	0.42	0.46	0.50	0.49	0.49	0.49
Enrollment	62,302	63,334	63,978	64,530	65,348	65,816	66,524	67,206	67,884	68,457	68,978
Enrollment (% Change)	1.6%	1.7%	1.0%	0.9%	1.3%	0.7%	1.1%	1.0%	1.0%	0.8%	0.8%

