

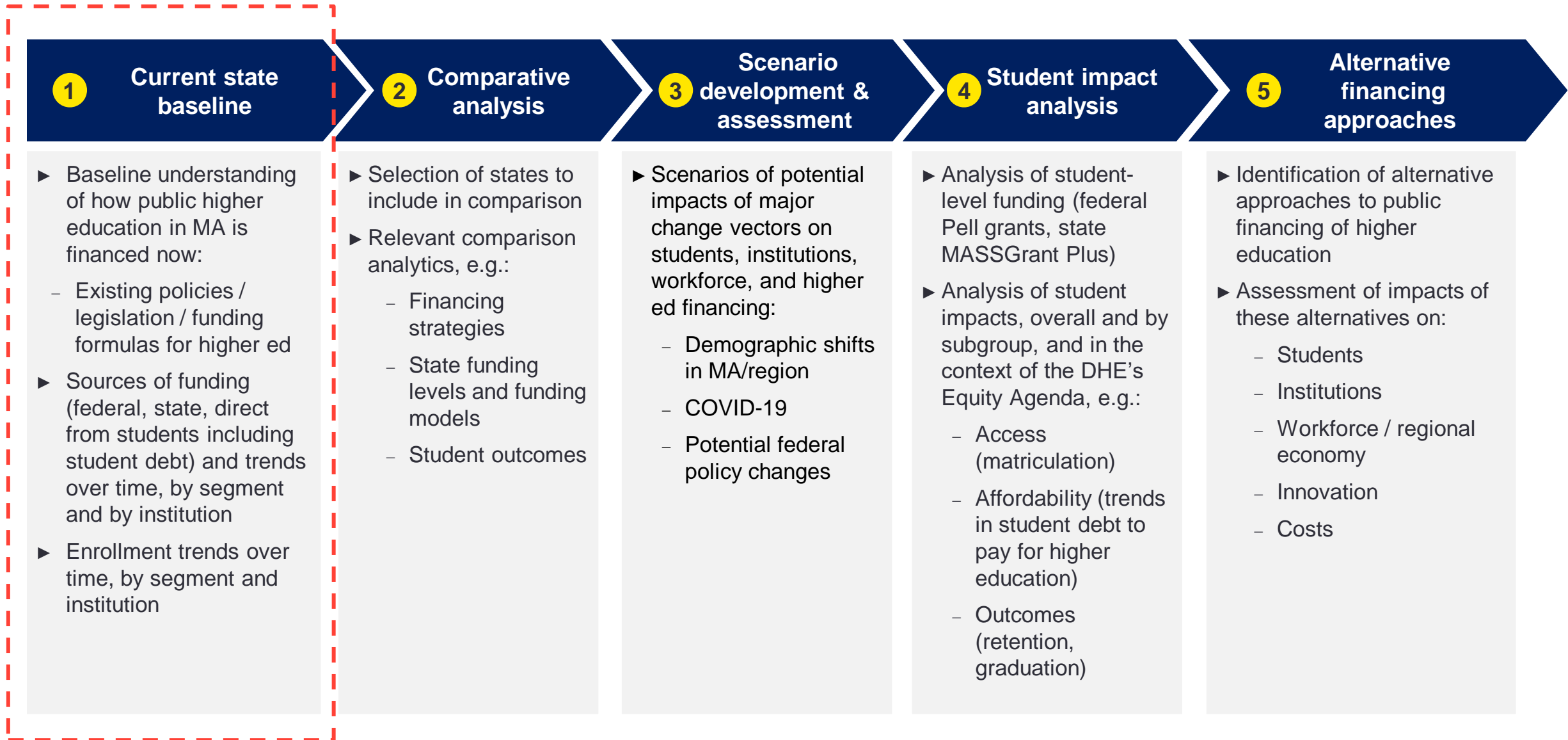
Finance and Administrative Policy Advisory Council (FAAP AC)

Strategic Review of Public Higher Education Financing: Establishing a current state baseline

March 8th, 2022

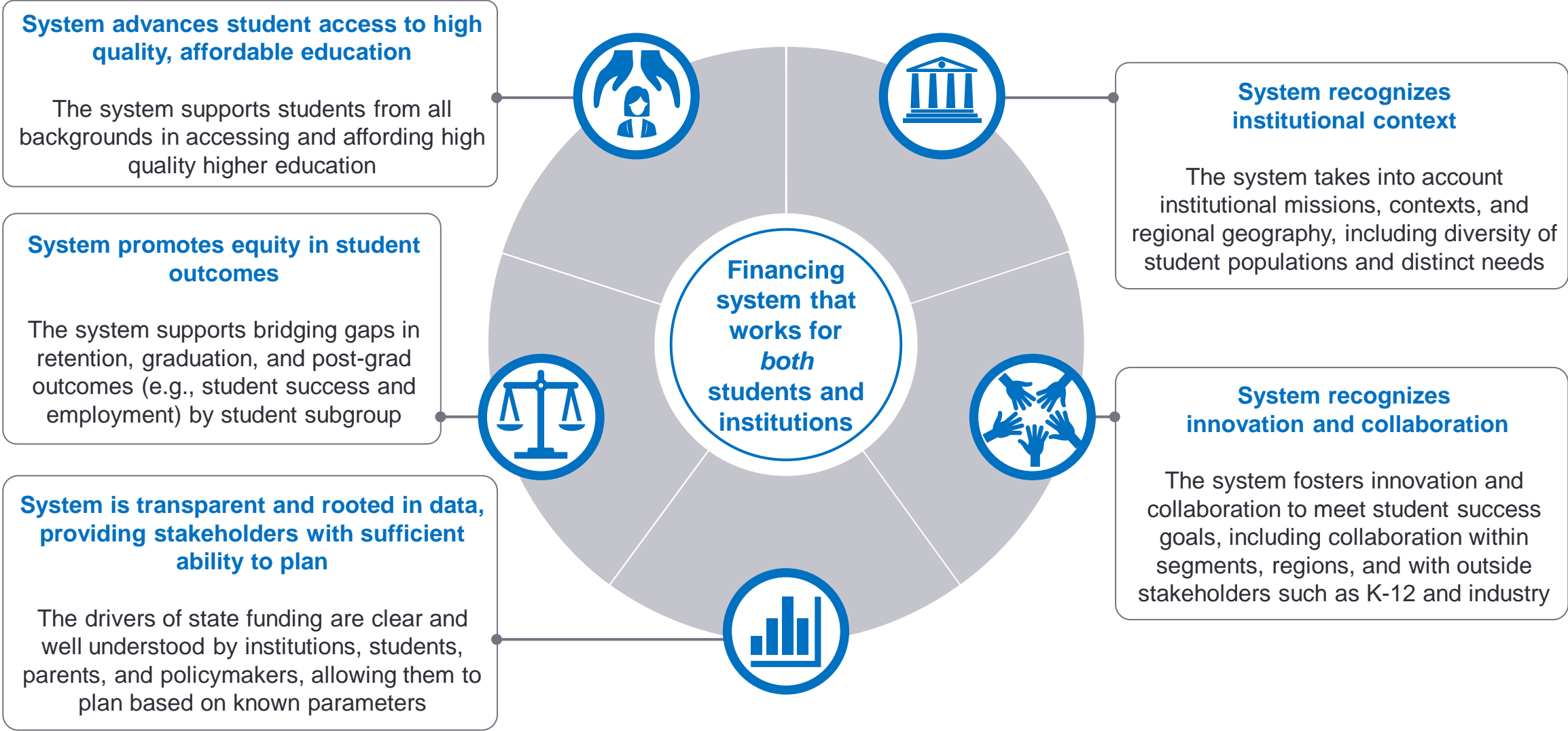
Project Update

Phase 1, which focused on establishing a current state baseline, is concluding



Commonwealth's Vision for the System of Public Higher Education Financing

Guiding principles can help shape the public higher education financing system



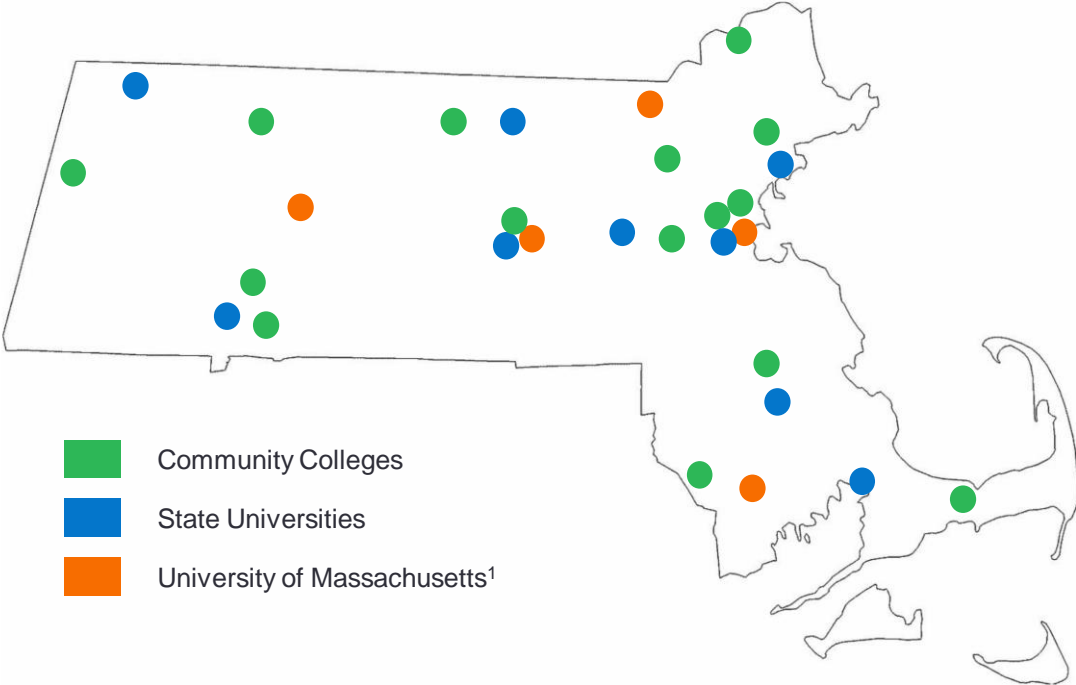
Executive Summary

Current state baseline – highlights

- ▶ Public higher education in Massachusetts is comprised of **three distinct segments** (community colleges, state universities, and the UMass System) with different missions, student bodies, and funding dynamics.
- ▶ Over the last ~15 years, these three segments have **served ~70% of Massachusetts residents** choosing to enroll in post-secondary education in higher education institutions located in the Commonwealth. In-state students account for 87% of all students enrolled in public higher education institutions in Massachusetts (fall 2020).
- ▶ Today, the state contributes **~\$1.9 billion annually** to public higher education in Massachusetts. **Over 80% is provided directly to institutions** in large block grants or fringe benefits. Over the last 20 years, the state's support has been highly cyclical, with recent funding surpassing the high water mark of FY01 in real dollars.
- ▶ Significant shifts in public higher education enrollment have occurred over the last twenty years:
 - ▶ After increasing steadily in the first decade of that timeframe, **enrollments have been declining overall.**
 - ▶ The **mix of FTE enrollments by segment has shifted.** The share of MA residents served by public higher ed has decreased for community colleges, increased for UMass, and stayed relatively constant for state universities.
 - ▶ The **student population has become increasingly diverse**, with the proportion of under-represented minorities enrolled increasing across all segments, but most significantly at community colleges.
- ▶ Despite these enrollment shifts, **relative state funding allocations have remained static across segments.**
- ▶ This has resulted in **substantially different funding models by segment**, with community colleges relying most heavily on state funding and federal funding (most of which is Pell grants for students attending community colleges) and state universities and UMass relying more on tuition and fees as a funding source.

Executive Summary

MA public higher education institutions serve ~244k students (or ~151k on a full-time equivalent basis) annually across 28 institutions, organized into three distinct segments



Metric (FY21)	Community Colleges (15)	State Universities (9)	UMass System (4) ¹	Total (28)
Credit-bearing Headcount ²	~97k	~59k	~88k	~244k
Full-Time Enrollment (FTE)	~42k	~40k	~69k	~151k
% Undergrad FTE	100%	82%	80%	86%
% Graduate FTE	0%	18%	20%	14%

Community colleges also serve a significant portion of non-credit bearing students. Non-credit bearing students are omitted from this analysis

1. For the purpose of this analysis, UMass Medical School has been omitted from the metrics
 2. Community colleges serve a significant number of students who are non-credit bearing.
 Source: HEIRS

Executive Summary

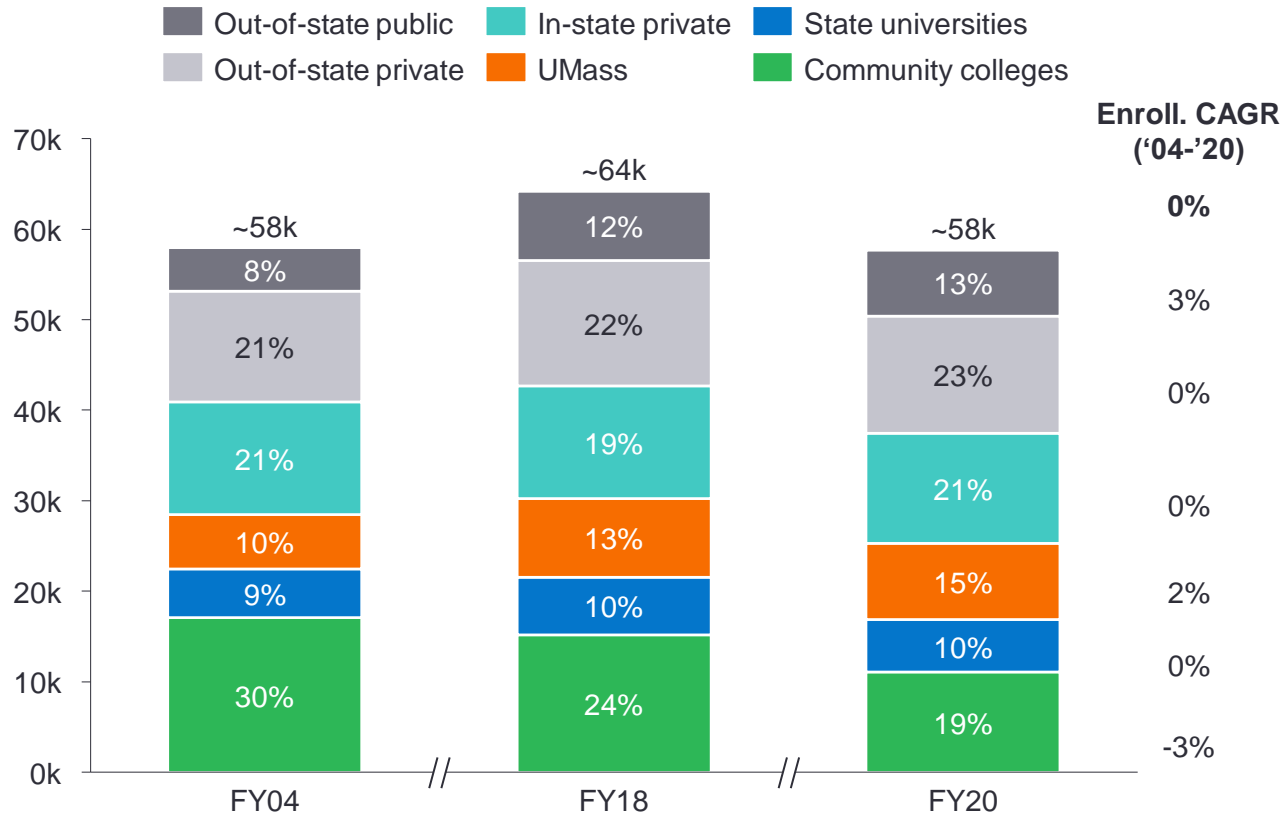
This presentation relies on data from the Commonwealth’s information systems, supplemented with the Integrated Post-secondary Data System (IPEDS)

Data sources			
Topic	Source	First year	Last year
MA public higher education TOTAL REVENUE by source	Integrated Post-secondary Education Data System (IPEDS)	2001	2020
State Funding	MA Management Accounting and Reporting System (MMARS), MA Department of Capital Asset Management and Maintenance (DCAMM)	2001	2021
Fringe Rates	MA Comptroller’s Office	2001	2021
UMass Revenue	UMass Internal Data	2001	2021
Student Enrollment	MA Higher Education Information Resource System (HEIRS)	2004	2021
Student Demographics	MA Higher Education Information Resource System (HEIRS)	2005	2020
Financial Aid by Institution and Institution Segment (MA Residents)	Massachusetts Department of Higher Education, Financial Aid File	2017	2020

Vital Role of Higher Education

The state's public colleges and universities serve ~70% of Massachusetts residents attending college in state; this has remained relatively constant over time, with some shift in segment mix

Matriculation place for first-time, full-time MA resident students¹, FY04, FY18, FY20



Public higher ed share of MA Resident in-state enrollment

FY04: 70% FY18: 71% FY20: 68%

Share of all MA Resident enrollment

FY04: 49% FY18: 47% FY20: 44%

Additional Highlights

- ▶ MA ranks **#1 for post-high school attainment rates at 60%** vs. national average of 45%
- ▶ MA ranks **#3 in post-secondary enrollment at 53%** for 18-24 year-olds, and has been in the top 3 states in the last five years
- ▶ Among MA residents attending college in state, **nearly 70% do so at a public institution.**
- ▶ **In-state students account for 87% of all students** enrolled in public higher education institutions in Massachusetts.²
- ▶ **A significantly larger share of graduates from MA public institutions remain in the state and contribute to the workforce:** Over 65% of 2008 graduates of MA public institutions were employed in MA 10 years after graduation compared to 40% of graduates of MA private institutions

1. Fall headcount for first-time, full-time students

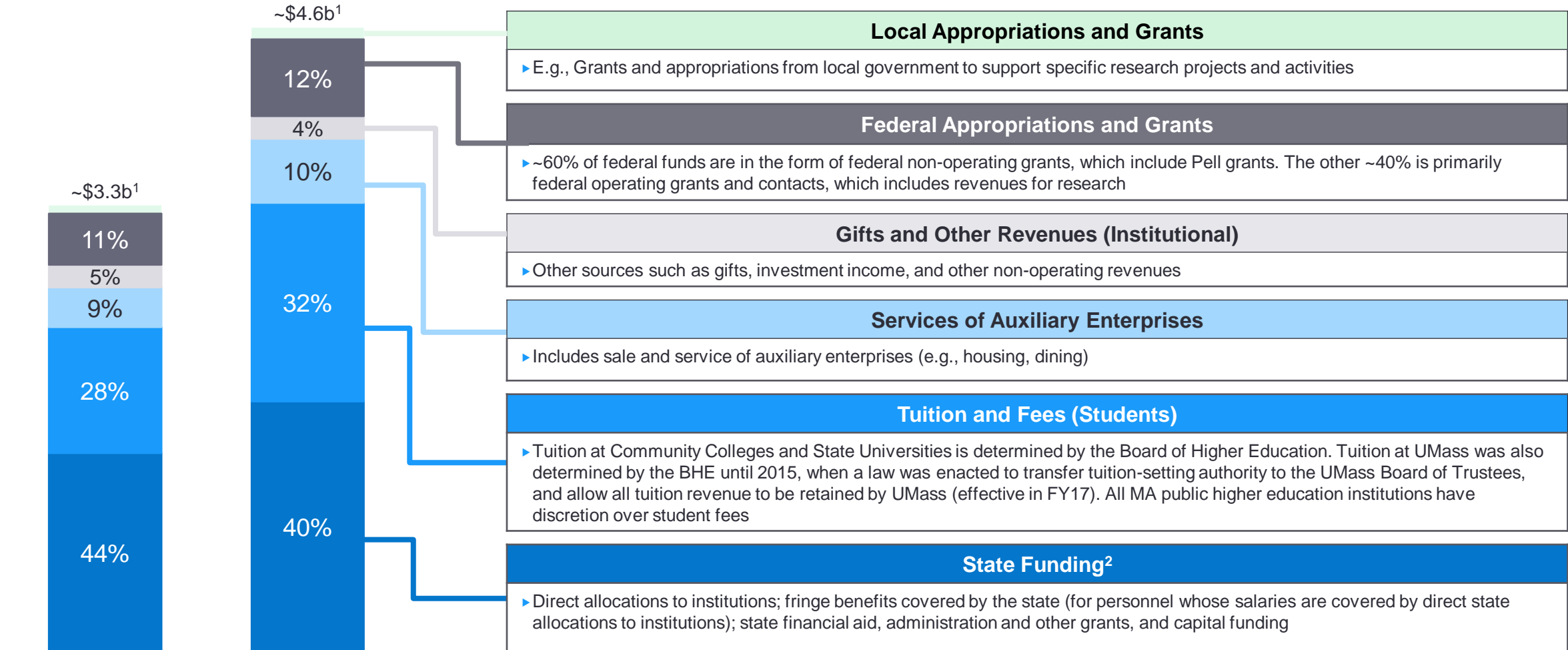
2. In-state students accounted for 87% of Fall 2020 headcount for public institutions

Source: IPEDS; NCES: Baccalaureate & Beyond Longitudinal Survey; Lumina Foundation: National Attainment 2009-2019; MA DOE

Sources of Financing for MA Public Higher Education: Overview

Total funding for MA public higher education is ~\$4.6b, of which 40% is state contributions¹

Components of higher education funding

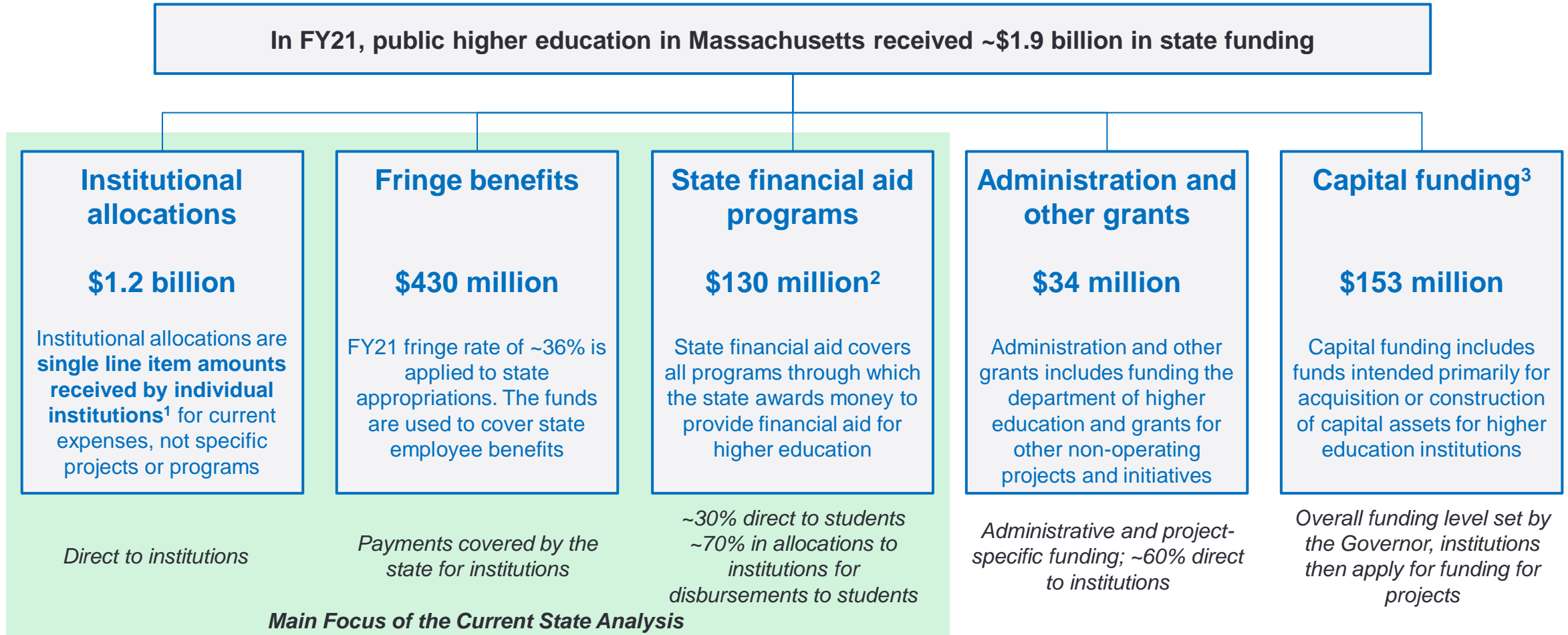


1. All dollar figures in 2020 dollars; UMass Medical School has been omitted from the metrics
 2.State funding includes state appropriations, fringe, state financial aid, DHE administration and other grants and capital
 Source: MMARS; DCAM; IPEDS; UMass Internal Data

Sources of Financing for MA Public Higher Education: State Funding Detail

Today, the state of Massachusetts contributes ~\$1.9 billion annually to financing public higher education. ~84% of this amount is in direct block grants to institutions or in fringe benefits

Total state funding for public higher education, by category



1. UMass receives one institutional allocation to fund all campuses; UMass Medical is excluded from this analysis

2. Includes an estimate for total waivers to students attending public institutions (excluding UMass waivers) and for the portion of MASSGrant awarded to students attending private institutions based on FY20 actuals

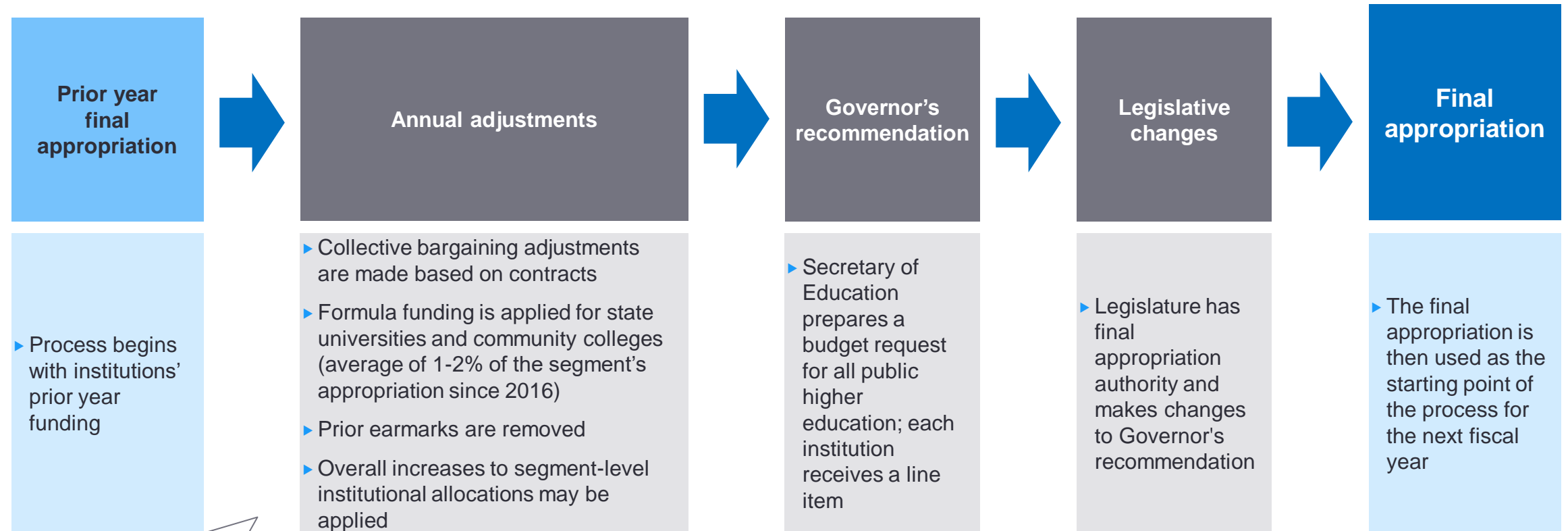
3. Capital Funding is calculated based on estimated bond funding from DCAM; excludes capital funding specifically for UMass Medical School, but includes general capital for the entire UMass system

Source: MMARS; DCAM; UMass Internal Data

Sources of Financing for MA Public Higher Education: Institutional Allocation Process

The ~ \$1.2 billion in state contributions made directly to public higher education institutions is allocated based on incremental adjustments to prior year's allocations

During major economic events (e.g., recessions) this process does not hold in MA



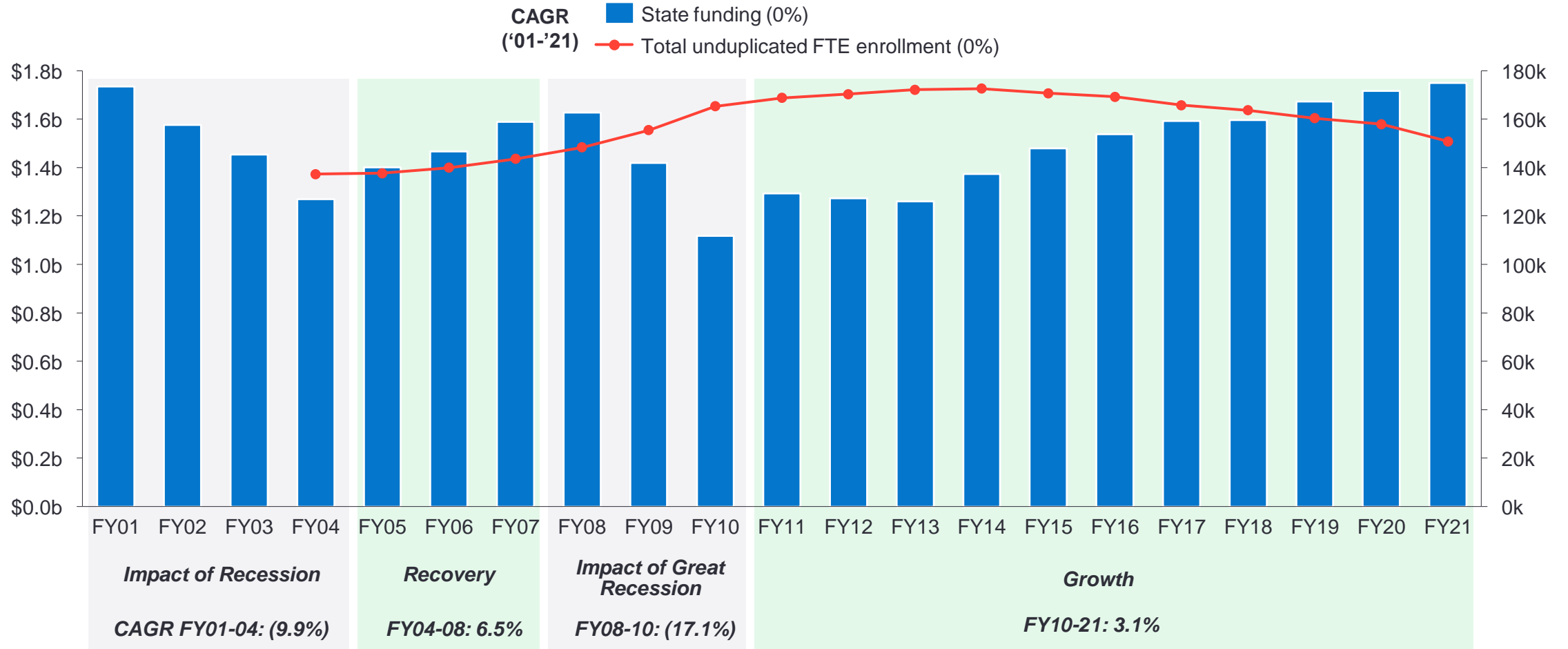
Formula funding was first introduced for community colleges and state universities in 2013 and 2015, respectively. Peak funding was \$20m for CCs in 2014 and \$8m for SUs in 2015, but has been between \$0 and \$2.75m for the past five years

The prior year's appropriation, has on average accounted for ~98% of the final appropriation over the past 5 years

State Funding Trends: FY01-FY21

Over the last 20 years, state support for public higher education has been highly cyclical in real dollars, reflecting the economic environment

State spending¹ on public higher education and annual FTE enrollment, 2020 dollars, FY01 – FY21



1. Capital funding excluded from total state funding for the purposes of this trend analysis
 Note: All dollar figures in 2020 dollars
 Source: MMARS; HEIRS; UMass Internal Data

State Funding Trends: In \$ per Student FTE, FY04-FY20

Because of the cyclical nature of state funding and the big shifts in student enrollment, the amount of state spending per FTE has changed at very different rates across segments

State expenditures per FTE by segment, 2020 dollars, FY04 – FY20



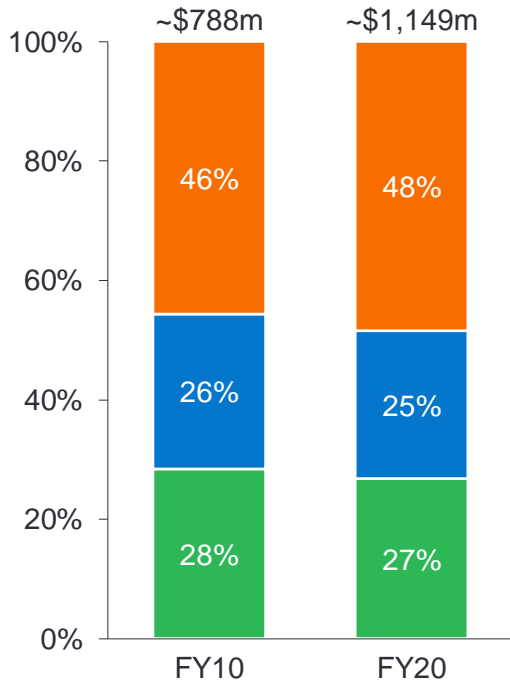
CC Enrollment	50,972	64,277 (3.9% CAGR)	47,933 (-2.9% CAGR)
SU Enrollment	37,709	43,530 (2.4% CAGR)	42,425 (-0.3% CAGR)
UMass Enrollment²	48,598	57,437 (2.8% CAGR)	67,532 (1.6% CAGR)

1. Average across undergraduate and graduate tuition; Inclusive of discounting
 2. Excludes UMass Medical School
 Note: All dollar amounts in 2020 dollars and include only state institutional appropriations (no fringe benefits)
 Source: MMARS; HEIRS; MA DHE Data Center; IPEDS; UMass Internal Data

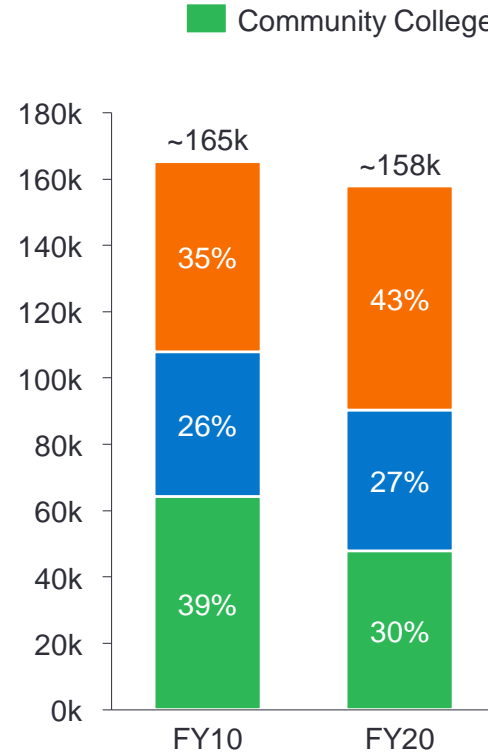
State Funding Trends: By Institution Segment, FY20 vs. FY10

Distribution of state funds has remained relatively similar by segment. It does not appear correlated with volume (overall enrollment) changes or student characteristics / needs

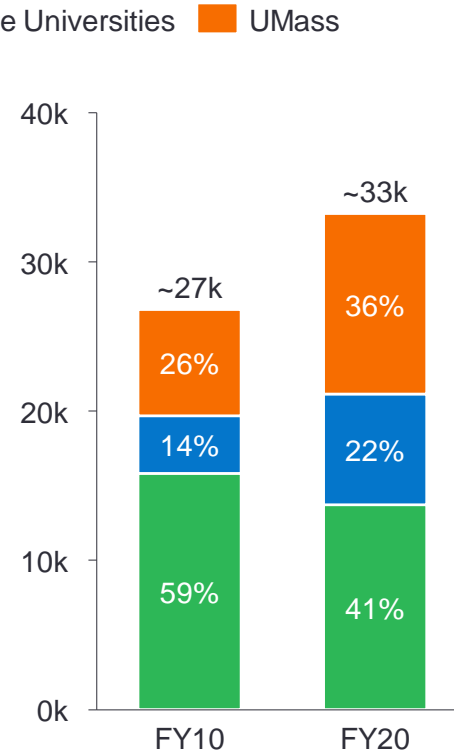
Institutional allocations by segment¹, 2020 dollars, FY10 – FY20



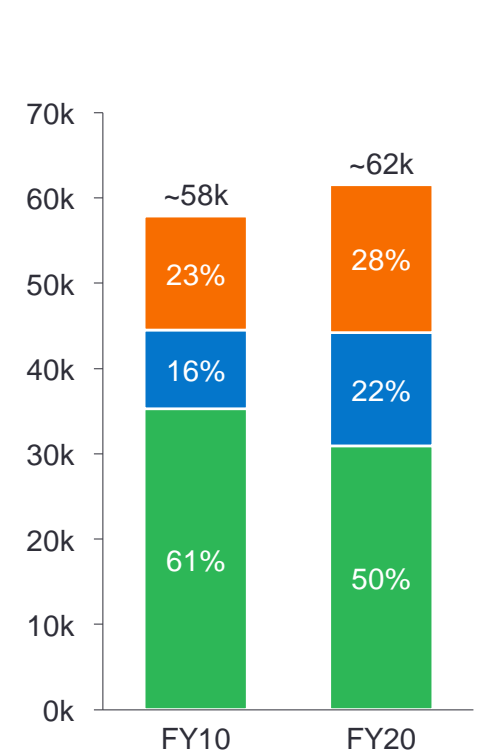
FTE Enrollment by segment, FTE, FY10 – FY20



URM¹ by segment, Fall FTE, FY10 – FY20



Pell Grant recipients by segment, FTE, FY10 – FY20



<u>URM students as % of total²</u>	<u>FY10</u>	<u>FY20</u>
UMass	12%	19%
State	10%	20%
CCs	25%	34%

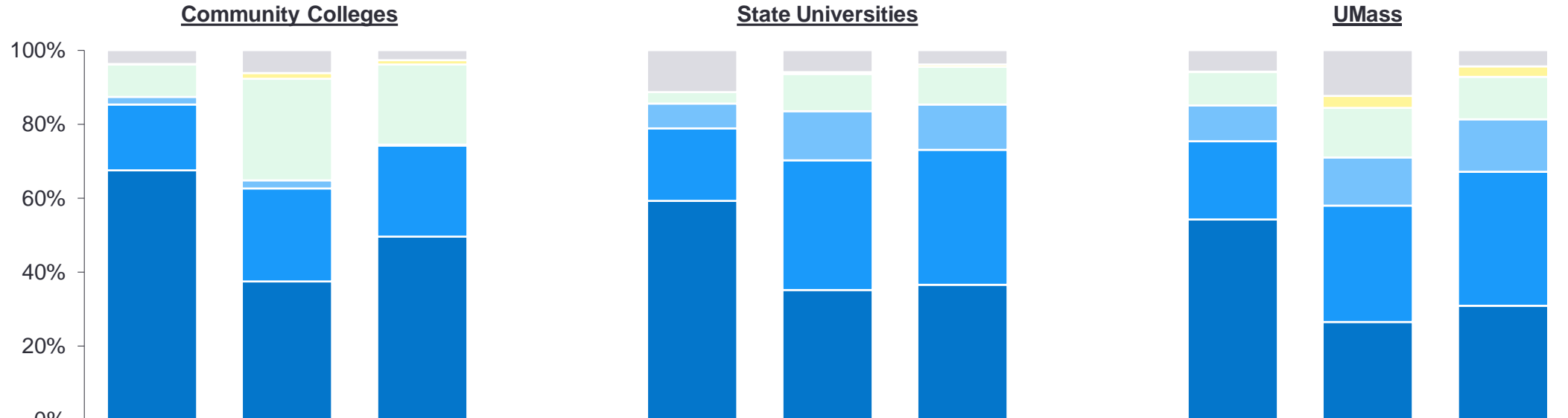
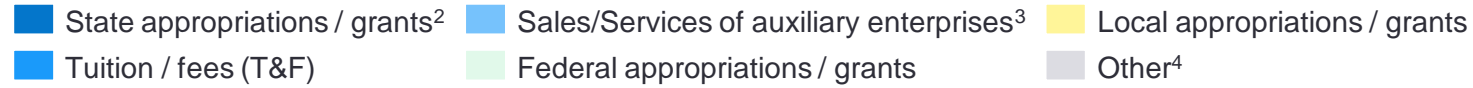
<u>Pell recipients as % of total³</u>	<u>FY10</u>	<u>FY20</u>
UMass	23%	26%
State	21%	31%
CCs	55%	64%

1. Excludes UMass Medical
 2. Under-represented minorities
 3. Includes Black, Latinx, and Native American enrolled students, based on fall FTE

State Funding Trends: Institutional / Segment Response, FY01-FY20

In response to fluctuations in state funding, institutions developed varying operating models by segment, with all segments relying more on student-driven revenues over time

Institution revenue by source, by segment, 2020 dollars, FY01 – FY20



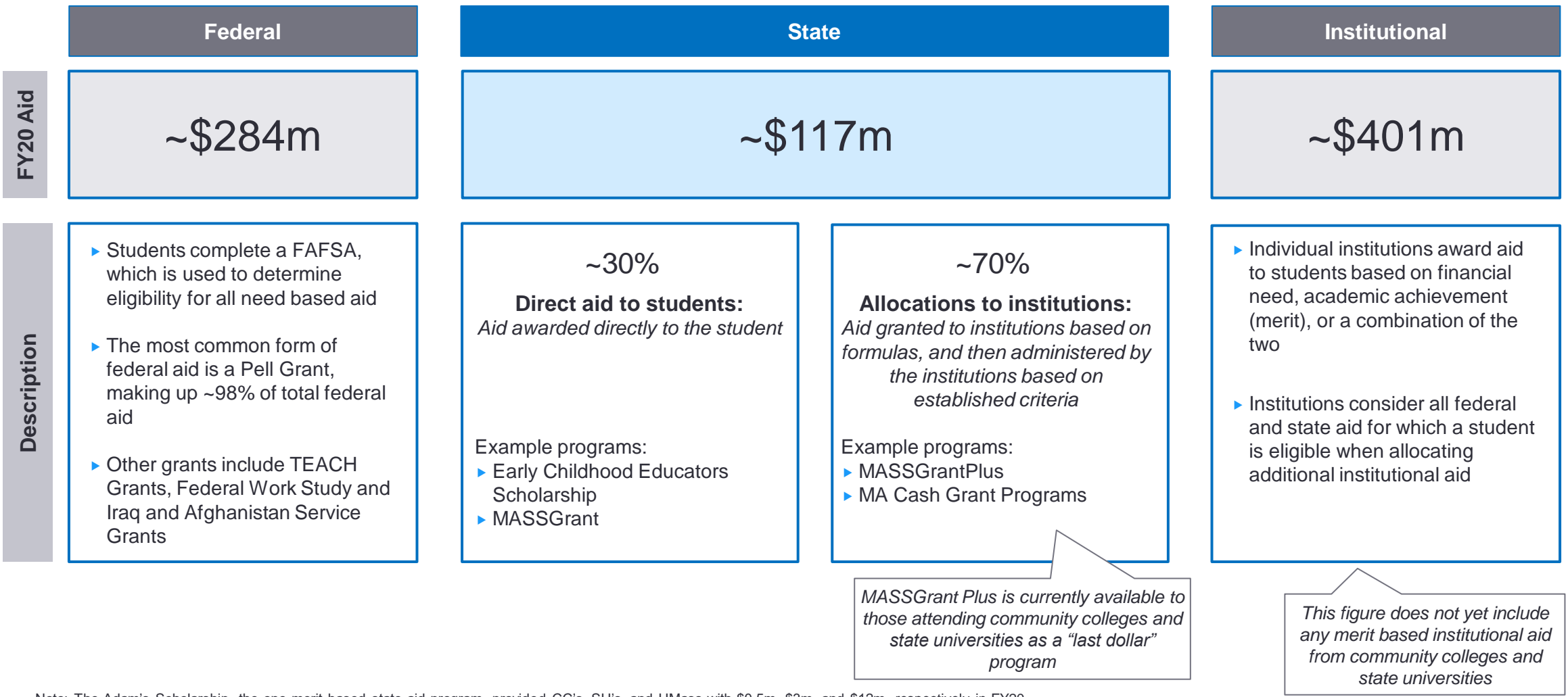
	FY01	FY10	FY20	FY01	FY10	FY20	FY01	FY10	FY20
% State	67%	37%	50%	63%	35%	37%	54%	26%	30%
% T&F	18%	25%	25%	21%	35%	36%	21%	32%	36%
% Auxiliary	2%	2%	0%	7%	13%	12%	10%	13%	14%
% Federal	9%	28%	22%	3%	10%	10%	9%	13%	12%

1. UMass revenue figures exclude the medical school
 2. State appropriations / grants includes fringe benefits and excludes capital funding and financial aid
 3. Sales of auxiliary includes revenue from residence halls, food services, athletics, and other student services
 4. Other includes sources such as gifts, investment income, and other non-operating revenues
 Source: IPEDS; MMARS; MA Comptroller's Office; UMass Internal Data

State Funding: Financial Aid

While public higher education institutions have begun to rely more heavily over time on student tuition and fees, MA residents have been able to access three forms of financial aid

Financial aid sources for Massachusetts residents at public institutions, FY20

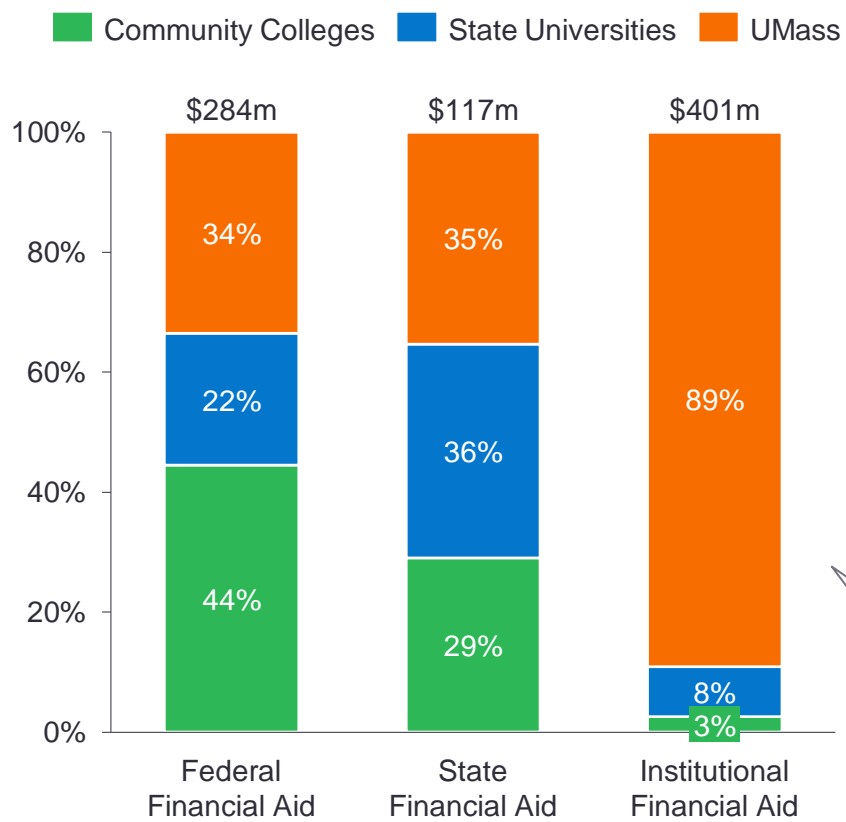


Note: The Adam's Scholarship, the one merit based state aid program, provided CC's, SU's, and UMass with \$0.5m, \$3m, and \$12m, respectively in FY20
 Source: Massachusetts Office of Student Financial Assistance; US Department of Education; Massachusetts Department of Higher Education, Financial Aid File; MARS; UMass internal data

State Funding: Financial Aid

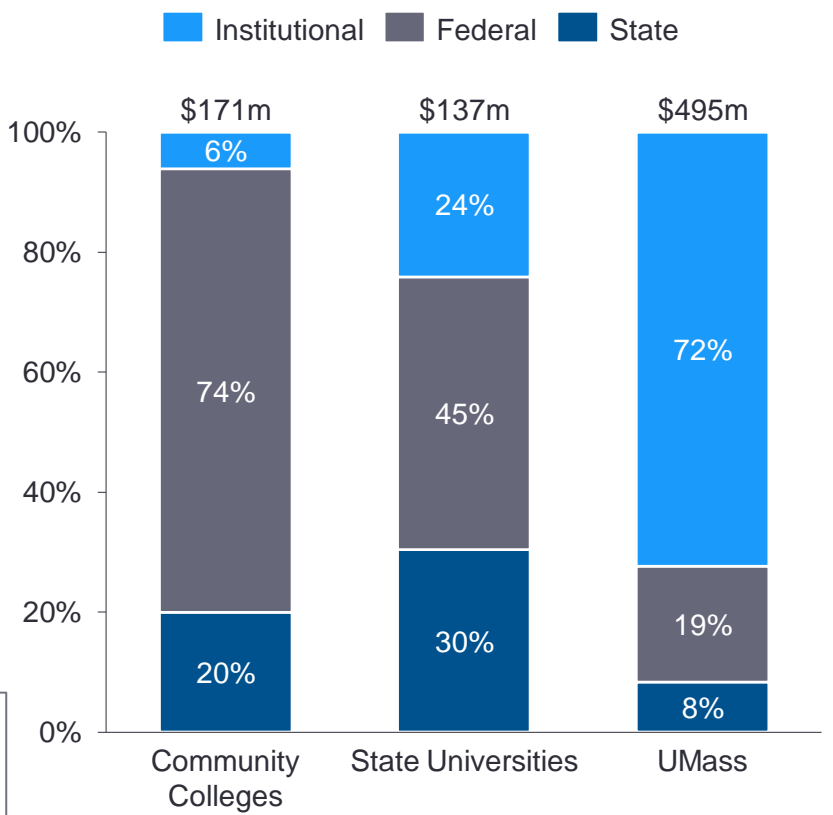
The role of state financial aid to students varies significantly across segments given differences in their respective student demographics and availability of institutional aid

Total financial aid to MA resident undergraduates, by segment and source, FY20



This figure does not yet include any merit based institutional aid from community colleges and state universities

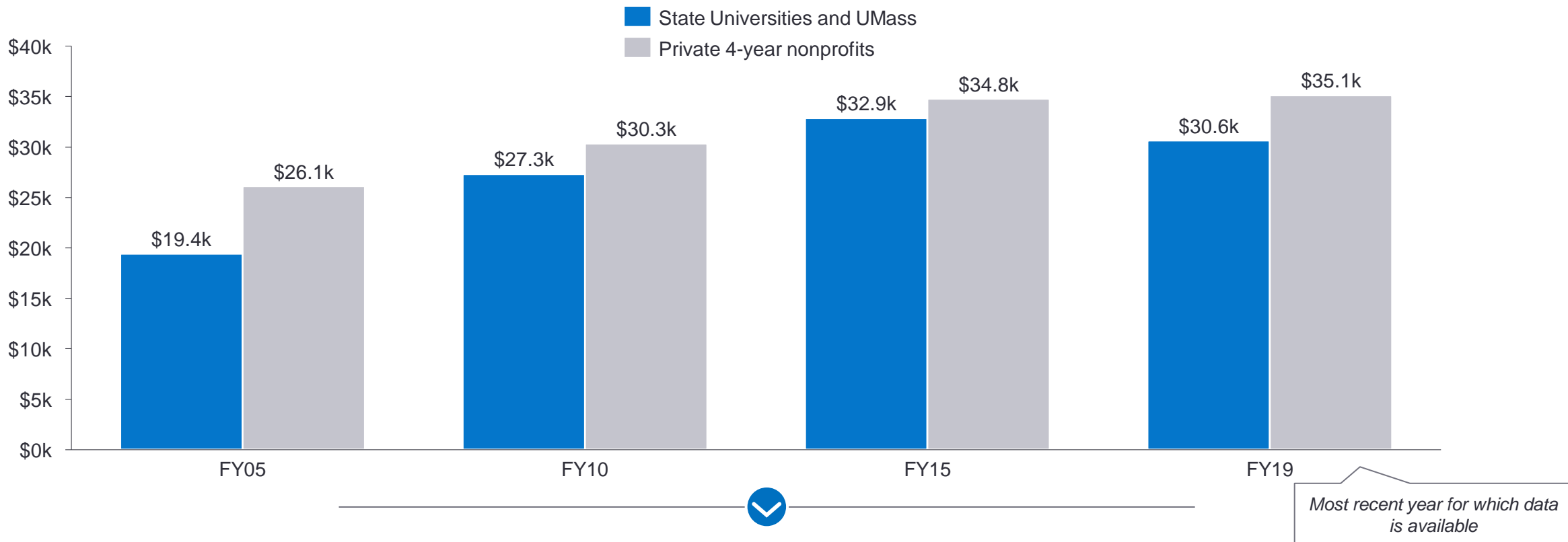
Total financial aid to MA resident undergraduates, by source and segment, FY20



State Funding: Financial Aid

Even with access to financial aid, average debt for graduates of public 4-year colleges and universities has been increasing

Average student loan debt¹ for graduates of public and private non-profit 4-year colleges and universities in MA, 2019 dollars, FY05 – FY19



More detailed analysis of student debt and broader student impacts of financing policy will occur in later phases of this project

1. Average student loan debt is in 2019 dollars
2. Average student loan debt was calculated by taking an aggregate for states, sectors, or other groupings of colleges from college-level data of over 13,000 U.S. colleges and universities. The 4 data sources that were primarily used were IPEDS, College Scorecard, Federal Student Aid, and CDS (Peterson's).
Source: Mass Budget / The Institute for College Access

Next Steps

Following this meeting...

1

Preliminary work will begin on the comparative state analysis

- State funding levels (e.g., total funding, funding per enrolled FTE, as % of total state spending)
- Financing strategies (e.g. input or input/volume-based, outcome-based)
- Student outcomes

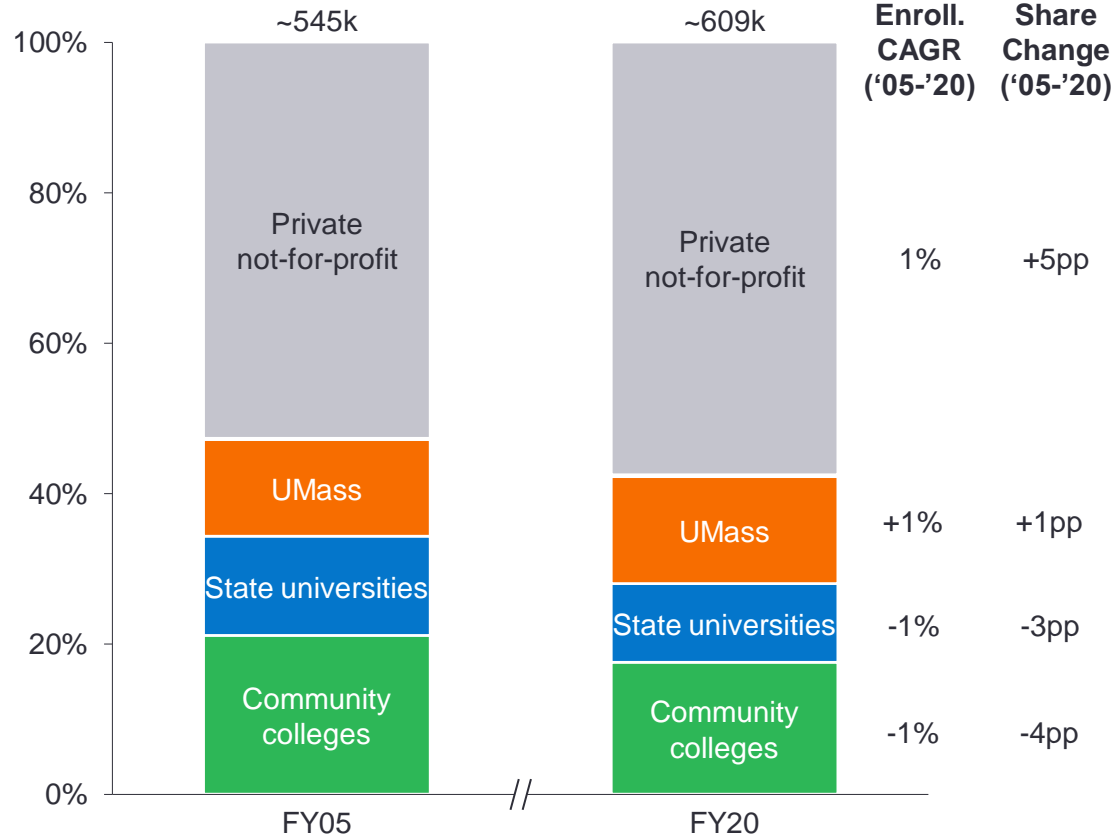
2

The comparative state analysis will be presented at the next FAAP AC meeting (likely late April 2022)

Public Share of Higher Education

The Commonwealth's public institutions serve ~40% of all students enrolled in Massachusetts and grant ~35% of degrees

Total 12-month unduplicated headcount in MA, FY05 versus FY20

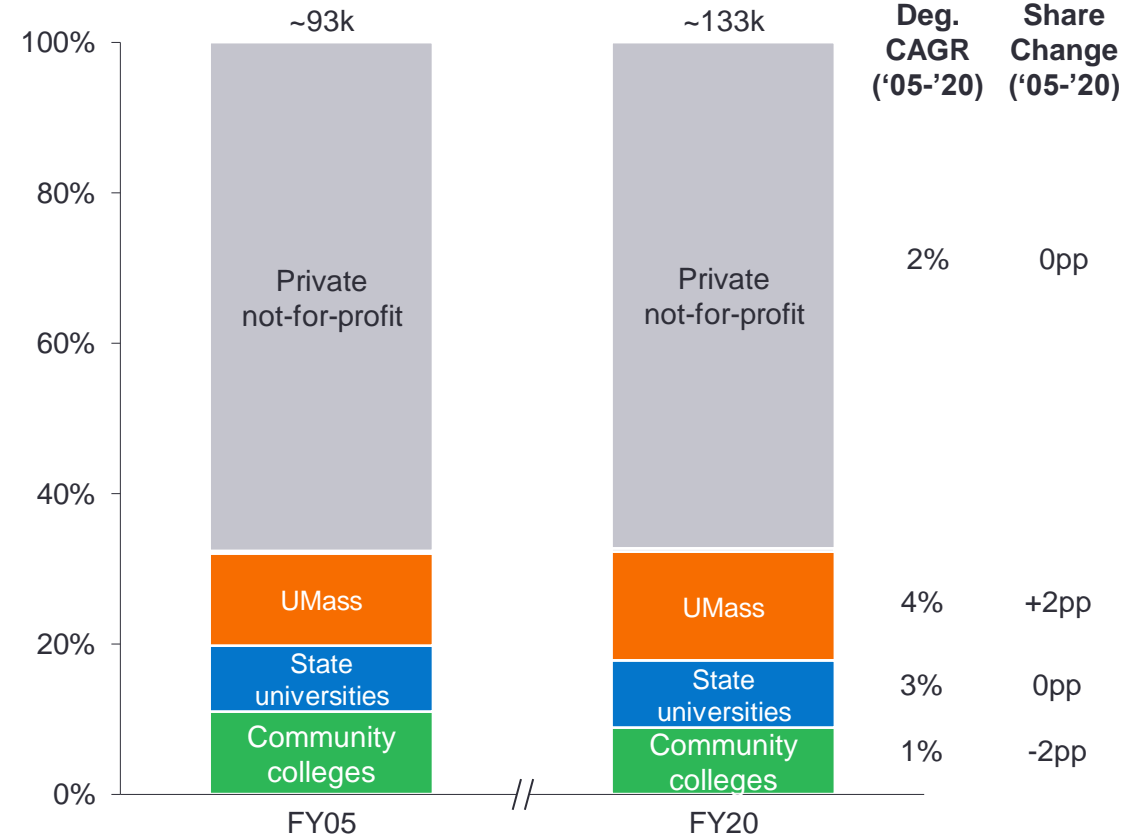


% attending state institutions

47%

42%

Total number of degrees / certificates granted in MA, FY05 versus FY20



% granted by state institutions

32%

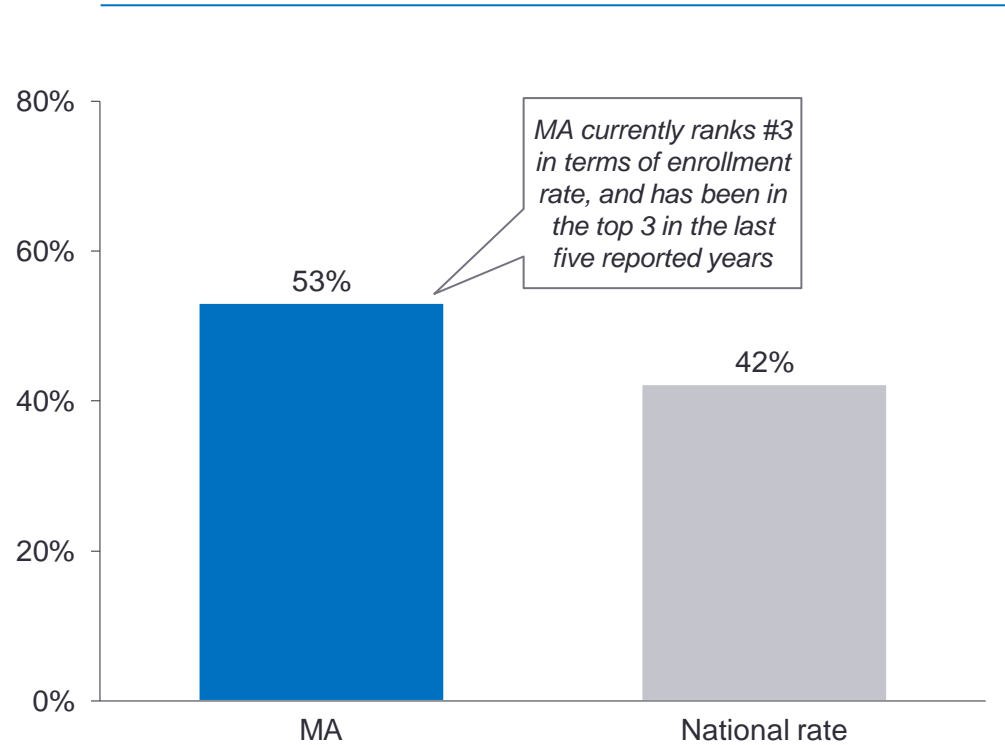
33%

Note: Includes total enrollment in all credit-bearing degree / certificate programs
Source: IPEDS

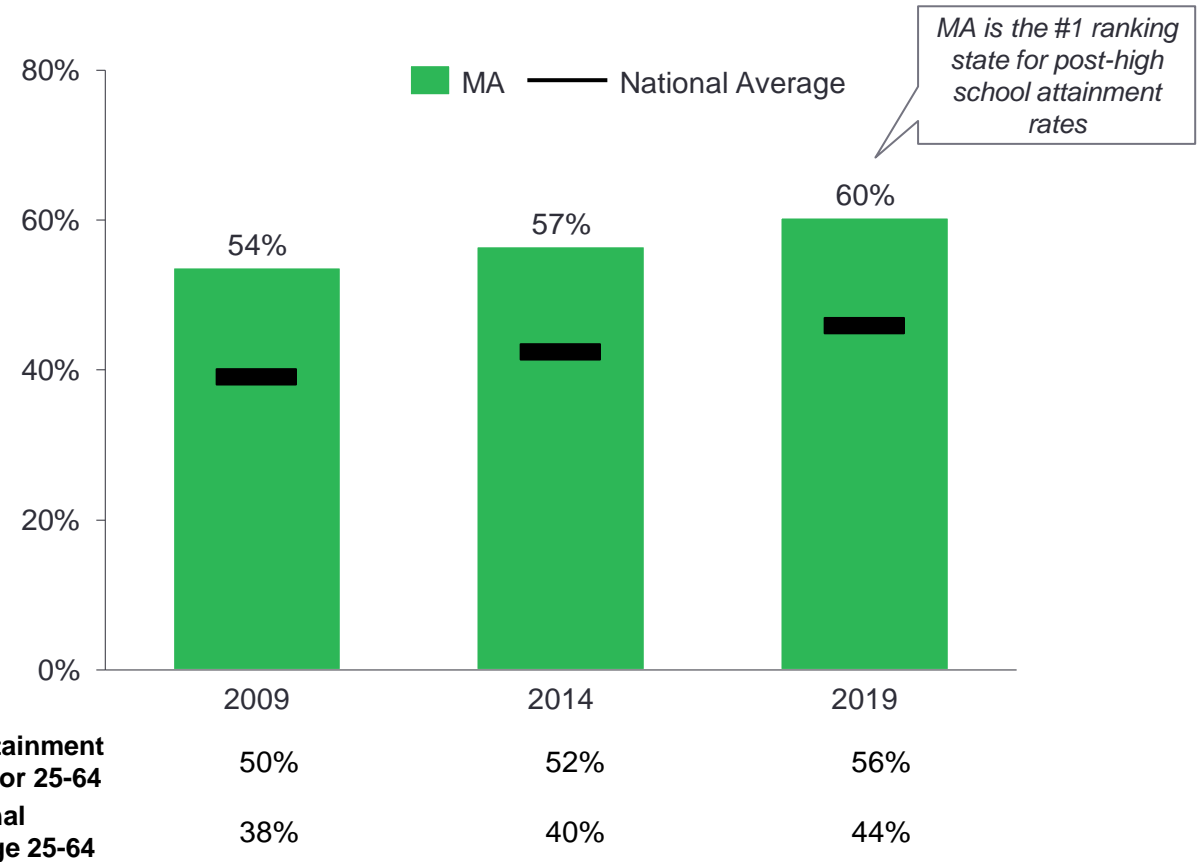
Vital Role of Higher Education

Massachusetts ranks #3 among all states in post-secondary enrollment rates, and #1 in post-secondary educational attainment rates

Percentage of 18 to 24-year-olds enrolled in degree-granting post-secondary institutions¹, 2019



Post-secondary attainment rates in MA², ages 25-34, 2009 – 2019



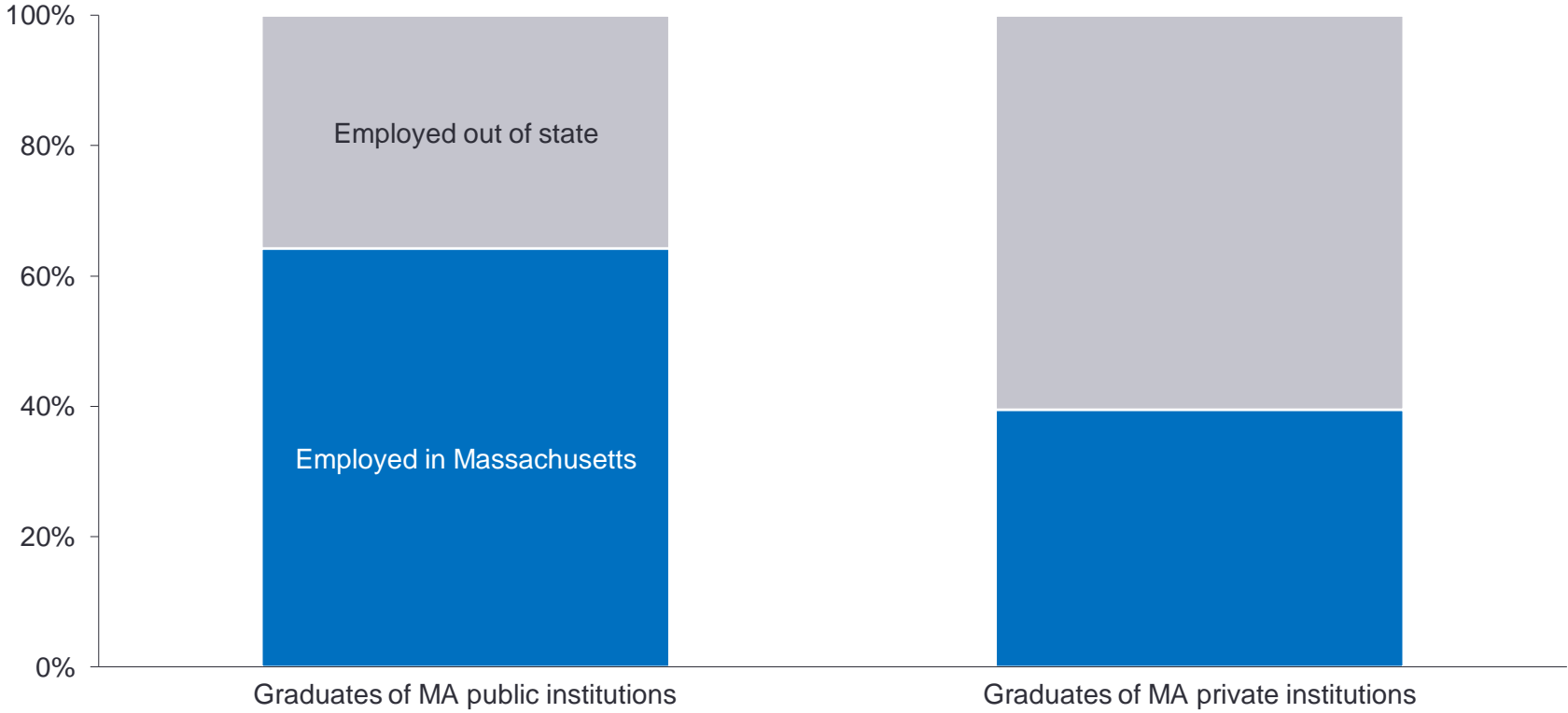
1. Data are based on sample surveys of the entire population 18 to 24 years old residing within the United States

2. Includes graduate or professional degrees, bachelor's degrees, associates degrees, certificates, industry-recognized certifications, but excludes short term certifications; ages 25-34

Vital Role of Higher Education

Higher education graduates are a vital part of the state economy, with a larger share of public higher education graduates staying in the state

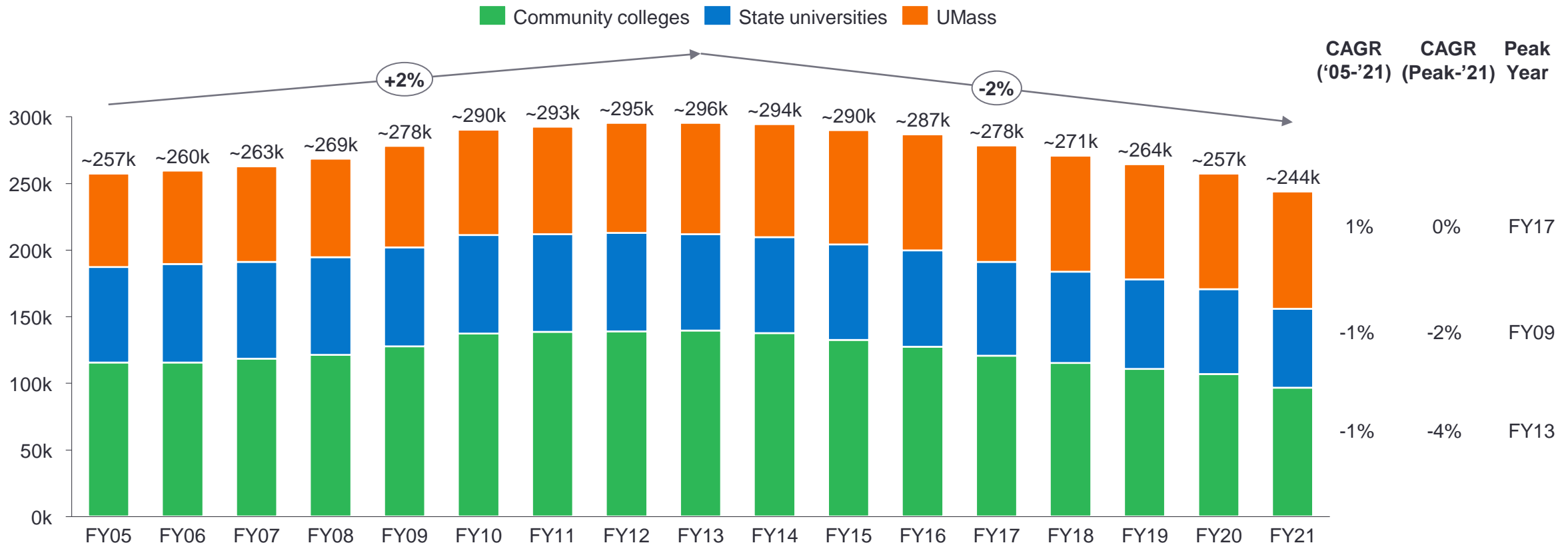
State of employment in 2018 for class of 2008 MA college graduates



Enrollment

Student headcount at state universities and community colleges has been flat to declining, while enrollment has grown at UMass institutions

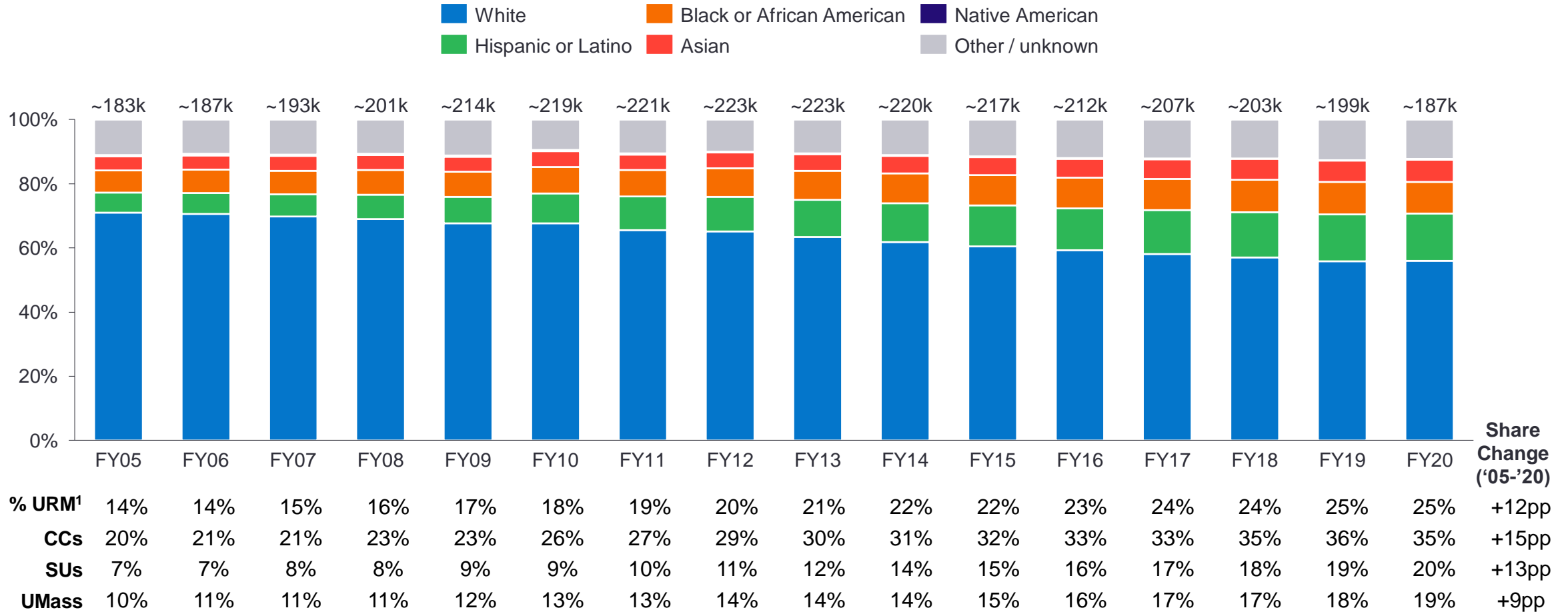
Annual unduplicated credit headcount for Massachusetts public institutions, FY05 – FY21



Enrollment

At the same time, enrollment has become increasingly diverse; today, 1 in 4 students are underrepresented minorities

Fall headcount by race / ethnicity for Massachusetts public institutions, FY05 – FY20

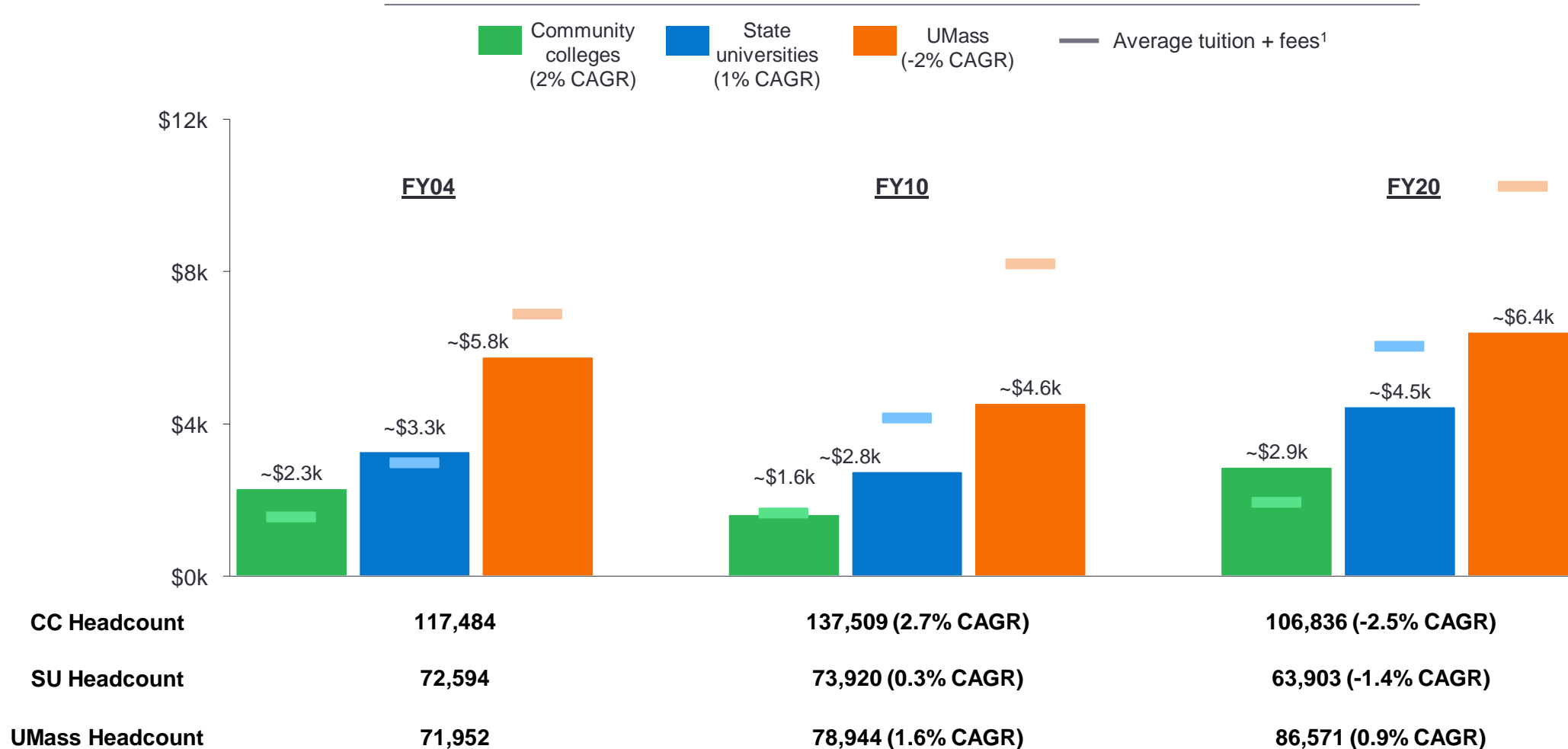


1. Includes Black, Latinx, and Native American enrolled students
Source: HEIRS

State Funding Trends: In \$ per Student Headcount, FY04-FY20

Because of the cyclical nature of state funding and the big shifts in student enrollment, the amount of state spending per FTE has changed at very different rates across segments

State expenditures per annual unduplicated headcount by segment, 2020 dollars, FY04 – FY20



1. Average across undergraduate and graduate tuition; Inclusive of discounting
 Note: All dollar amounts in 2020 dollars and include only state institutional appropriations
 Source: MMARS; HEIRS; MA DHE Data Center; IPEDS, UMass Internal Data