At the September 20th Board of Curators meeting Vice President Ryan Rapp will present the annual financial status report, reflecting on the University’s performance for Fiscal Year 2018. The report will include an update on the University’s overall financial performance and positioning along with a breakdown of performance across business units. The Board will receive copies of the financial statements for the University when complete in October. The following narrative will provide background on challenges the University faces and actions that need to be taken to overcome those challenges.

**The Environment in Higher Education is Changing**

As extensively discussed in the materials presented for the FY 19 Operating Budget, the environment for public higher education in Missouri and nationally is changing. Since 2001, the University of Missouri faced flat state support. Since 2016, University enrollments declined. For the first time since the formation of the System, the University is facing a confluence of three factors:

- Flat to declining state support
- Flat to declining enrollment
- Flat to declining tuition

As long as these factors exist together, the University will need to get smaller, find new revenue growth, or most likely a combination of both. However, the factors faced by the University of Missouri are not significantly different from the rest of the marketplace, although individual trends may vary.

In December of 2017, Moody’s issued their annual outlook on the Higher Education sector, shifting their sector outlook from “Stable” to “Negative”. The outlook reflects Moody’s view that operating revenue pressures will continue. The factors driving this view include:

**Tuition:**

- Demographic trends in the Midwest and Northeast will lead to a 5% drop in high school graduates.
- Public Universities will continue to have lower net tuition growth with increasing political constraints, including state limits on raising tuition.
- To maintain enrollments and revenue, Universities will have to expand student markets utilizing technology, increase retention, expand online and certificate programs, and attract additional transfer students.
- Small private universities and regionally oriented public universities will continue to face the most pressure and struggle to differentiate themselves in a crowded market.
- Public universities will continue to experience greater pressure than private universities.
State Funding:
- Slowdowns in state funding due to lower tax revenue growth, as higher education represents the largest discretionary component of state budgets.
- Moody’s expects states to look at significant changes to higher education systems including mergers and combinations.

Research Funding:
- Federal research funding will remain flat to slightly down, with the potential for material reductions.
- Any material reductions in federal funding will strain research as programs cannot typically be scaled back without disrupting projects, which are typically capital intensive, multi-year endeavors.
- Research funding will continue to shift towards comprehensive universities which offer more opportunity for collaboration across disciplines. While comprehensive Universities are most exposed to federal reductions, they also have the strongest relationships with philanthropists and corporate partners to backfill the losses.
- Midsized research Universities are the most vulnerable because programs are viewed as mission critical, with limited prospects of finding alternative sources of funding.

Patient Care:
- Academic Medical Center growth will continue to outpace overall healthcare sector growth, although expenses will begin to grow faster than revenue.
- Reimbursement rates from Medicare and Medicaid will continue to slow, and pressure from commercial reimbursement and employers will mount.
- The volume shift to academic medical centers will continue, but margins on the volume will continue to erode.

Moody’s also expects expense pressures will continue to mount for Universities. As a sector, University costs weigh heavily towards labor, with 60%-70% of costs at Universities driven by labor costs, including pension and post-employment benefits. Growing employment and international competition will pressure universities to raise wages, especially for top-performing faculty in an increasingly competitive research environment. In addition to wage growth, public universities will continue to face rising expenses from pension and other post-employment liabilities. Favorable return environments have slowed the growth of net liabilities, however, long term pressures will become even worse with the next market correction. States and universities are taking steps to address their underfunded status, including:

- Offering defined contribution plans
- Mandating higher contributions by plan participants
- Curbing benefits where allowable

Taken in total, the factors in the Moody’s industry report point to a weakening of financial performance across the industry, as competition increases for both students and faculty.
Standard & Poor’s (S&P) also maintains a negative outlook on the higher education industry. In their 2018 outlook, S&P notes the cost of inputs to degrees (labor, capital, etc.) continue to rise while the student’s willingness to pay is declining. Student expectations of services are continuing to increase while available revenues decline. The colleges best positioned to deal with this change will be able to understand and communicate the value of their output in relation to their input costs.

The trends outlined in the report are evident to varying degrees across the universities within the System.

**Performance Trends Across the System**

The following section will break down performance across the key areas, as identified by Moody’s rating methodology. The following section will explore performance-related (margin, revenue growth, leverage, and liquidity) versus scale-related metrics (size, diversity and wealth), as scale metrics can only be evaluated across the system in total.

**Operating Cash Flow Margin**

Operating cash flow margin measures how much is leftover after paying expenses for generating a dollar of revenue. Operating cash flow margin excludes any capital investment (buildings, equipment) and any interest payments.

The chart above shows performance in 2018 and average performance over the last five years compared to the AA1 median performance for public universities. In total, UM System performs close to the credit median on operating cash flow margin. Each business unit has a slightly different story on the trends:
• MU: MU maintains very consistent cash flow margins over time, with no years below 10.5% and no years above 16.5% over the past 10 years. The management team has shown the ability to manage expenses within revenue changes very consistently over time.

• UMKC: Kansas City cash flow margins have been well below the System average for the last decade. Margins have continued to decline further over the past four years. In 2018, there was an improvement in cost management as the campus was able to decrease cost year over year, the only cost decrease in the last 10 years.

• S&T: Cash flow margins continue to fall after remaining above median at 16% from 2009 to 2015. From 2016 to 2018, the cash flow margin has fallen below median, slowly eroding each successive year. Operating expense growth has slowed each year, but revenue growth has slowed at a faster pace driving the margin erosion.

• UMSL: Cash flow margins at St. Louis have remained stable at close to 12% over the past three years, after falling to -2.0% in FY 2015. Prior to 2015, UMSL experienced a five year erosion of margin from above credit median to negative on an operating cash flow basis.

• MUHC: MU healthcare continued the strong relative cash flow margin performance in 2018, with a margin of 14.7%. Margin has been above 14% for the last four fiscal years, whereas cash flow margins averaged around 11% for the preceding six years. The improved cash flow margins are largely a result of strong revenue growth, although operating expense growth outpaced revenue growth for FY 2018.

Overall operating cash flow margins remain positive across the system, with softer performance at UMKC and a negative trend at S&T.

Operating Revenue Growth

Revenue growth is the key underpinning all ratios as it represents the growth in the inflows to the organization. As noted in the introduction, revenue growth remains the key challenge for the University in the coming years:
As a System, operating revenue growth remains close to the credit median average. However, at the business unit level, the academic oriented business units continued to struggle to generate growth in FY 2018, with significant gaps to median performance. The primary driver of revenue growth remains to be enrollment, as the number of students primarily drives tuition and auxiliary services (housing, dining, parking, etc.) on campus.

The break point for operating revenue growth is FY 2016, with flat to declining growth across all campuses from that year on. The St. Louis campus has experienced flat revenues for a longer period of time, with no real growth since FY 2011. Conversely, MU Healthcare grew close to credit medians from FY 2010 to FY 2014, with an acceleration in revenue growth from FY 2015 to FY 2018, growing at 8.1% over those years.
Since FY 2016, enrollments have flattened across the system, with declines across all campuses to start FY 2019. Declining enrollments impact multiple revenue streams across the Universities, as payments from students do not just include tuition and impact residence halls, dining, and bookstores. Note that flattening enrollments correlate with the flattening of revenue growth noted above, including the UMSL decline that started in FY 2012. As student populations across campuses have declined, so have the related revenues paid by students. Turning around enrollments and student related revenues remains a large challenge for UM. Without additional students and student driven revenues, continued cost reductions will be necessary to maintain financial performance.

For FY 2019, the leading indicator does appear to be moving in the right direction on the MU campus where the freshman class was significantly larger than the prior year. However, on every other campus with a significant portion of freshman, freshman class sizes and undergraduate populations were smaller than the prior year’s class. The continued enrollment declines will continue to present financial constraints on the campuses.

It is important to note dependence on enrollments as a funding source for operations varies by campus. UMSL, UMKC, and Missouri S&T have a much heavier reliance on enrollment for revenue generation, as shown in the chart below:
On average, the median value skews to smaller sized public institutions as there is a concentration of large, more comprehensive institutions that move the average values. The three smaller campuses are heavily dependent on enrollment driven revenue (tuition and auxiliaries) and state appropriations, which in each case comprise more than three quarters of the campus budgets. Note that grants and contracts are no larger than 15% of the operation on any campus. Also note that gifts and endowment income are not larger than 6% on any of the campuses. The relative shares of these two items is so small it would take significant growth to make any type of dent in operational contributions.
The chart above compares MU alone, MU plus MU Healthcare, and the UM System in total to the Moody’s average revenue share for public higher education. The averages for public higher education contain the larger, more comprehensive public universities in the numbers, thus the increased share of healthcare. Note the MU operation, even without the hospital, is much more diverse than the other campus operations. The MU campus has more flexibility as a result, as the healthcare enterprise operates in a different environment than the academic enterprise.

With the hospital added to MU, it is clear the health system and healthcare enterprise continues to comprise a larger and larger portion of MU’s and UM’s operating base. This has largely been due to the growth trend of the healthcare operation compared to the academic revenue streams (mainly tuition and state appropriations) over the past decade. This trend will likely continue in the coming years, with a higher likely growth in healthcare than the other pieces of the enterprise.

Also of note for the averages and MU in general, gift and endowment income do not comprise a major component of revenues. This is even true for the large public universities with a few notable exceptions, and the Moody’s averages prove this concept out. This is very different than the average for private universities, who on average get over 15% of their operating budgets from endowments and gifts.

In their mid-year update for the industry, Moody’s predicted the next two years of growth by revenue stream for the public higher education industry in total. The table below compares those growth rates to the growth rates experienced by the universities in the system over the past five years:
In the table above, growth that has exceeded the Moody’s projection over the past five years has been highlighted in green with any negative growth highlighted in red. Note the past five years for the University of Missouri have been worse than the Moody’s projection for the industry in a year where Moody’s moved the industry-wide outlook to negative. This again suggests the University of Missouri continues to be on the leading edge of the revenue trends for higher education in total.

**Spendable Cash to Operations**

Spendable cash to operations measures the spendable savings of the campus (defined as investments less endowed assets) against the size of total operations. As a measure, it demonstrates the unit’s ability to deal with unexpected changes in revenues, providing time to respond to changes in the business environment.

As a measure, spendable cash to operations generally moves relatively slowly. It generally takes time to build cash against the entire expenditure base. Over the past decade, both MU and S&T have improved significantly on this ratio. MU’s continued improvement
upon this ratio over is especially noticeable on the graph above. This is largely reflective of their ability to maintain a margin and build cash balances as they shrunk operating expenses to respond to revenue decreases. UMKC, UMSL, and MU Healthcare have consistently been below the other entities on this measure, and have remained relatively stable over time.

**Spendable Cash to Debt**

Spendable cash to debt is a measure of the relative flexibility of the balance sheet and the ability of the organization to issue more debt against spendable savings.

In 2018, this ratio improved across all business units, as the University paid down debt and cash balances continued to grow. Over the past decade, this ratio has eroded significantly as the University issued debt to fund new building projects, specifically in Residential Life, Athletics, and other auxiliary type operations. Over time, the two urban campuses have grown their debt profile greater than the other campuses. MU Healthcare has significantly improved this ratio over time by building cash balances from operating performance growth, but still remains below the credit medians. This has been a historically weak ratio for MU Healthcare since recovering from the poor performance of FY 2001-2002.

Taken in combination with the previous ratio, it becomes very clear the MU campus maintains a strong balance sheet compared to the other campuses. This reflects both MU’s capacity to invest and their strong financial performance over time. The other campuses and MU Healthcare benefit from their attachment to MU’s strong financial performance through the System’s integrated credit. The diversity of operation and scale also helps to reduce the overall cost of capital for all business units, MU included.
Changing the Financial Model

As noted in the preceding, the biggest forward risk and challenge for the institutions in the University of Missouri System remains revenue growth. Public higher education continues to shift from appropriated revenues to earned revenues and public universities must adapt. Said another way, students continue to pay more of the share of public higher education costs, and with continued tuition increases the price paid for tuition reflects true market pricing with true market demand behavior. Students are asking public universities to demonstrate their value for the dollars they spend to attend. If students do not see a value, they will take their enrollment and tuition to another institution.

The problem with the current market shift is not one of rapid change, the shifts in demographics and related public policies has been relatively slow over time. However, the slow pace of the change is actually one of the biggest risks, we won’t realize things have changed drastically because the change will happen over a decade, not just in any one-year shock. The enrollment chart a few pages in front demonstrates the market might already be moving on the University of Missouri.

Financially, the University’s budget models need to change to reflect the new normal of earned revenues. In the University’s academic core operations, current budget models and financial systems are set up to control spending on set appropriations. Annually, each operating unit receives a “revenue allocation” from central administration that they spend against over the course of the year. However, for auxiliary units and gift and grant funds, individual units do control the revenues and the related spending on those revenues.

The majority of the University’s budget process is used to determine the amounts to be given to the units. This results in an annual focus on cost and makes the units focus on making key financial and operational decisions once a year. Historically, this system has worked well for the University, units generally only spend what they are appropriated, with a few notable exceptions, but these are normally resolved by management.

This internal model results in a very cost based focus, as units only feel as if they control costs after the revenue is allocated. Currently, the incentive of individual units and budget holders is to hold on to as much revenue allocation as possible, as holding those allocations gives the individual unit leader spending flexibility to do what they want. Generally, this results in budget where expenses exceed traditional expense run rates for each department. Strict lockdowns or attempts to manage out the margin in the expense budgets results in unit leaders spending money they might not otherwise have spent towards the end of the period.

The appropriation based revenue allocation models result in an organization that almost overly focuses on expense management during the budget process. Budget holders feel at the mercy of revenue allocators, and in many cases do not understand how their decisions to spend money drives revenues. On the chart below, it causes the organization to focus hard on the red line while only a few work on the green line:
The biggest issue on the chart above is actually the flattening of the green line. The organization feels pain in attempting to adjust the red line below inflation, forcing decisions to cut across the campus. Under the current model, central administration and a relative few number of units feel the pressure to grow revenues. Instead of everybody in the organization feeling the pressure to grow revenues, only a relative few do.

For the universities in the system to truly change their operation and realize their long-term goals, they must become engaged around growing revenues; that starts with an understanding of which programs generate the most revenue against their relative cost of operation. Every campus has in some form performed these types of analysis, however, they are all spreadsheet based and backward looking.

Developing department by department profit and loss statements and tuition revenue allocations is somewhat complicated, and best left to each individual campus on what makes sense (for instance, how much revenue is allocated based on who is teaching the class versus what degree program the student is in). However, as a baseline, each university should be able to understand what the relative contribution is of each degree program, and be able to delineate and rationalize any subsidization.

Developing this revenue and cost information by department also helps each unit focus on their relative efficiency. UMKC is already utilizing data to improve academic efficiency. Departments have been able to review section fill rates and rationalize the number of sections offered for classes, increasing faculty productivity. By teaching the same number of students in fewer sections, faculty have more time to teach other classes or perform additional research. Additionally, overly full sections of classes that are prerequisites required for degree completion can be expanded to ensure students can complete their degrees faster.

In allocating revenues down to lower levels of the organization based on the drivers of those revenues, the individuals who make the decisions to drive revenues can better
understand the impact of their decisions on revenue growth. It also encourages units to spend resources to generate resources, as they get to see the revenues grow if they are able to generate additional revenue. Whereas in the old model, increasing cost for additional benefit was dependent on the allocators recognizing the revenue growth to fund the cost increase.

Each university needs to be given freedom in designing their revenue allocation model, as it should align with their individual business models. The individuals that understand this best are located on each campus.

The Importance of Financial Accountability

To drive the change, UM System Finance will shift the focus of an annual budget and performance reporting process to a continuous monitoring focus with annual target setting. At the System-level, the President and CFO will work with each campus to identify and set performance targets on the same metrics mentioned earlier in this narrative. Each campus chancellor and CFO will be jointly accountable for meeting those performance metrics, with significant incentives and consequences set by the President for failure against targets.

For FY 2019, UM System Finance will utilize the already scheduled monthly closing meetings to discuss performance against financial targets as a trial run. Targets will start as those set with the FY 2019 budget process, with the expectations FY 2020 targets will be significantly better than FY 2019 targets and start with FY 2019 run rates for revenues and expenses. In addition to the financial metrics identified, each university will set targets related to their academic missions that will be reviewed on a monthly basis in conjunction with the financial information. It is the responsibility of the campus leadership team to spread their own targets to the rest of the organization.

Moving to these models represents a big change for the universities and it will take a few years for the institutions to adapt to the changes. UM System will work with the universities to develop the data and revenue models necessary to track progress against the goals. Additionally, staff will need to be trained on the new methodology and how to adapt to the new accountability for a more continuous approach. Each campus leadership team will need to engage with their units to better understand how to approach the allocation of accountabilities deeper into the organization, and this piece will take time. UMKC and MU are already heading down this path, with faculty committees engaged to review their allocation and budget models.

Implementing financial accountability will take time and significant energy on the part of leadership. However, spreading the responsibility for revenue growth across the organization creates the opportunity to change the overall trajectory that has led to the difficult decisions we’ve had to make as a set of universities over the past three years. We control our own destiny, it is time to get more people involved in righting the ship and getting back on the path to growth. Otherwise, our annual process will continue to be about spreading the cuts across the organization.
The revenue growth is the most important to change. We must change the trajectory by maintaining margin, but we have to start making spending decisions based on where we can generate revenue rather than just cutting spending to balance the budget. If we keep cutting spending without thinking about where to grow, we are going to continue the downward trend. New investment and a new approach is necessary for the Universities in the System to achieve their potential for the people of Missouri.