



**Office of
Internal Audit**

FLORIDA INTERNATIONAL UNIVERSITY

**Audit of Performance Based Funding and
Emerging Preeminent Metrics Data Integrity
Report No. 20/21-06
February 1, 2021**



Office of Internal Audit

Date: February 1, 2021

To: Kenneth G. Furton, Provost, Executive Vice President, and Chief Operating Officer
Hiselgis Perez, Associate Vice President of Office of Analysis and Information Management

From: Trevor L. Williams, Chief Audit Executive

A handwritten signature in blue ink, reading "Trevor L. Williams", is placed over the printed name of the sender.

Subject: Audit of Performance Based Funding and Emerging Preeminent Metrics Data Integrity, Report No. 20/21-06

Beginning in fiscal year 2013-14, the State University System of Florida Board of Governors (BOG) instituted a performance-based funding program predicated on 10 performance metrics used to evaluate Florida's public universities. For fiscal year 2020-2021, the Florida Legislature and Governor allocated \$560 million in performance-based awards, of which FIU received \$66.2 million. Furthermore, in 2019, the University achieved sufficient preeminent metrics to receive the designation of an emerging preeminent state research university by the authority of Florida Statute 1001.7065.

Pursuant to a request by the BOG and the mandate of Florida Statute 1001.706, we have completed an audit of the University's performance based funding and emerging preeminent metrics. The primary objectives of our audit were to determine whether the processes established by the University ensure the completeness, accuracy, and timeliness of data submissions to the BOG that support the Performance Based Funding and Emerging Preeminent Metrics and to provide an objective basis of support for the University Board of Trustees Chair and President to sign the representations made in the *Performance Based Funding - Data Integrity Certification* that will be submitted to the Board of Trustees and filed with the BOG by March 1, 2021.

Our audit confirmed that FIU continues to have good process controls for maintaining and reporting performance metrics data. In our opinion, the system, in all material respects, continues to function in a reliable manner. Nevertheless, although having no adverse impact on the calculation of the metrics tested, we noted three conditions related to some ancillary university processes for data maintained in PantherSoft that suggested the need for process improvements thereto and have communicated them to management in a separate letter dated February 1, 2021, for their consideration and follow up.

I also take this opportunity to express our appreciation for the cooperation and courtesies extended to us during this audit.

Attachment

C: FIU Board of Trustees

Mark B. Rosenberg, University President

Kenneth A. Jessell, Senior Vice President and Chief Financial Officer

Javier I. Marques, Vice President and Chief of Staff, Office of the President

Carlos B. Castillo, General Counsel

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OBJECTIVES, SCOPE, AND METHODOLOGY

As directed by the State University System of Florida (SUS) Board of Governors (BOG) and mandated by Florida Statutes, we have completed an audit of the data integrity and processes utilized in the University's Performance Based Funding (PBF or "Funding Metrics") and Emerging Preeminent Metrics. Our audit entailed an examination of files submitted to the BOG between September 1, 2019, and August 31, 2020. The primary objectives of our audit were to:

- (a) Determine whether the processes established by the University ensure the completeness, accuracy, and timeliness of data submissions to the BOG that support the Performance Based Funding and Emerging Preeminent Metrics; and
- (b) Provide an objective basis of support for the University Board of Trustees Chair and President to sign the representations made in the *Data Integrity Certification*, which will be submitted to the Board of Trustees and filed with the BOG by March 1, 2021.

Our audit was conducted in conformance with *the International Standards for the Professional Practice of Internal Auditing* promulgated by The Institute of Internal Auditors and *IS Audit and Assurance Standards* issued by ISACA, and included an examination of the supporting records, systems, and processes and the performance of such other auditing procedures, as we considered necessary under the circumstances.

During the audit, we:

1. Updated our understanding of the data flow process for all the relevant data files from the transactional level to their submission to the BOG;
2. Performed an analysis of the *Annual AIM [Office of Analysis and Information Management] Review*. This review includes an assessment of audit logs, system access controls, and user privileges within PantherSoft and State University Database System (SUDS);
3. Confirmed change management controls for redefining and/or correcting data to meet the BOG's data definition standards during the submission and resubmission process;
4. Interviewed key personnel, including AIM employees, functional unit leads, and those responsible for developing and maintaining the information systems;
5. Reviewed BOG data definitions, SUS data workshop documentation, and meeting notes from the relevant groups within the BOG and FIU to identify changes to the BOG Funding Metrics;
6. Observed current practices and processing techniques;
7. Tested the latest data files for three of the 10 performance based funding metrics and four of the seven emerging preeminent metrics achieved and submitted to the

BOG as of August 31, 2020. Sample sizes and elements selected for testing were determined on a judgmental basis applying a non-statistical sampling methodology.

Audit fieldwork was conducted from September 2020 to December 2020. In fiscal year 2019-2020, we issued the report Audit of Performance Based Funding and Emerging Preeminence Metrics Data Integrity (Revised), (Report No. 19/20-06), dated February 12, 2020. That audit report offered five recommendations, which management implemented, and our office confirmed during our audit follow-up process prior to the commencement of our current audit.

BACKGROUND

The Florida Board of Governors has broad governance responsibilities affecting administrative and budgetary matters for Florida's 12 public universities. Beginning in fiscal year 2013-2014, the BOG instituted a performance-based funding program, which is predicated on 10 performance metrics used to evaluate the universities on a range of indicators, including graduation and retention rates, job placement, and access rate, among others. Two of the 10 performance metrics are “choice metrics”—one picked by the BOG and one picked by each university’s Boards of Trustees. These metrics were chosen after reviewing over 40 metrics identified in the Universities’ Work Plans but are subject to change yearly. The metrics pertaining to Florida International University are depicted in the following table.

FIU’s Performance Based Funding Metrics			
1.	Percent of Bachelor's Graduates Employed (Earning \$25,000+) and/or Continuing their Education Further One Year After Graduation	6.	Bachelor's Degrees Awarded in Areas of Strategic Emphasis
2.	Median Wages of Bachelor's Graduates Employed Full-time One Year After Graduation	7.	University Access Rate (Percent of Undergraduates with a Pell-grant)
3.	Net Tuition and fees per 120 Credit Hours	8.	Graduate Degrees Awarded in Areas of Strategic Emphasis
4.	Four Year Graduation Rate (Full-time, First-Time-In-College)	9.	Board of Governors' Choice - Percent of Bachelor's Degrees without Excess Hours
5.	Academic Progress Rate (2nd Year Retention with GPA above 2.0)	10.	Board of Trustees' Choice – Number of Post-Doctoral Appointees

In 2016, the Florida Legislature passed, and the Governor signed into law the Board of Governors’ Performance-Based Funding Model, now codified into the Florida Statutes under Section 1001.66, *Florida College System Performance-Based Incentive*.

The BOG’s model has four guiding principles:

1. Use metrics that align with the SUS Strategic Plan goals
2. Reward Excellence or Improvement
3. Have a few clear, simple metrics
4. Acknowledge the unique mission of the different institutions

The Performance Funding Program also has four key components:

1. Institutions are evaluated and receive a numeric score for either Excellence or Improvement relating to each metric.
2. Data is based on one-year data.
3. The benchmarks for Excellence were based on the Board of Governors’ 2025 System Strategic Plan goals and analysis of relevant data trends, whereas the

benchmarks for Improvement were decided after reviewing data trends for each metric.

4. The Florida Legislature and Governor determine the amount of new state funding and the proportional amount of institutional funding that would come from each university's recurring state-base appropriation.

The following table summarizes the performance funds allocated for the fiscal year 2020-2021 using the performance metrics results from fiscal year 2019-2020, wherein FIU earned 88 points.

Florida Board of Governors Performance Funding Allocation, 2020-2021¹				
	Points*	Allocation of State Investment	Allocation of Institutional Investment	Total Performance Funding Allocation
FAMU	73	\$ 13,322,826	\$ 14,831,071	\$ 28,153,897
FAU	85	21,197,885	23,597,645	44,795,530
FGCU	88	11,715,809	13,042,127	24,757,936
FIU	88	31,333,250	34,880,409	66,213,659
FSU	85	41,292,730	45,967,379	87,260,109
NCF	87	4,035,348	4,492,180	8,527,528
UCF	89	35,175,932	39,158,113	74,334,045
UF	90	47,699,700	53,099,666	100,799,366
UNF	83	13,214,326	14,710,288	27,924,614
USF	94	35,923,379	39,990,177	75,913,556
UWF	82	10,088,815	11,230,945	21,319,760
Totals		\$ 265,000,000	\$ 295,000,000	\$ 560,000,000

*Institutions scoring 51 points or higher receive their full institutional funding restored.

Source: BOG

During the 2019 Legislative Session, lawmakers approved Senate Bill 190 that contains language amending section 1001.706, Florida Statutes. The new language at section 1001.706(5)(e) states:

Each university shall conduct an annual audit to verify that the data submitted pursuant to ss. 1001.7065 and 1001.92 complies with the data definitions established by the board and submit the audits to the Board of Governors Office of Inspector General as part of the annual certification process required by the Board of Governors.

¹ The amount of state investment is appropriated by the Legislature and Governor. A prorated amount is deducted from each university's base recurring state appropriation (Institutional Investment) and is reallocated to each institution based on the results of the performance-based funding metrics (State Investment).

In addition to the data integrity audit for the Performance Based Funding Model, universities designated as preeminent or emerging preeminent must conduct a similar audit for the data and metrics used for preeminence status consideration. The BOG permits this audit either to be included with or separate from the Performance Based Funding Data Integrity Audit.

In 2019, Florida International University achieved sufficient preeminent metrics to qualify for designation as an emerging preeminent state research university by the authority of Florida Statute 1001.7065. Emerging Preeminent status is achieved upon meeting six of the 12 metrics, while Preeminent status requires meeting 11 of the 12 metrics. The University met seven of the 12 metrics as noted in **bold type** below:

FIU's Emerging Preeminent Metrics			
1.	Average GPA and SAT Score for Incoming Freshman in Fall Term	7.	Total Amount R&D Expenditures in Non-Health Sciences
2.	Public University National Ranking	8.	National Ranking in Research Expenditures
3.	Freshman Retention Rate (Full-Time, First-Time-In-College)	9.	Patents Awarded (over a 3-year period)
4.	4-Year Graduation Rate (Full-Time, First-Time-In-College)	10.	Doctoral Degrees Awarded Annually
5.	National Academy Memberships	11.	Number of Post-Doctoral Appointees
6.	Total Annual Research Expenditures (Science & Engineering only)	12.	Endowment Size

Organization

AIM consists of the Office of Institutional Research (IR) and the Office of Retention & Graduation Success. One of the goals of AIM is to provide the University community with convenient and timely access to information needed for planning, data driven decision-making, and to respond to data requests from external parties. IR is currently responsible for:

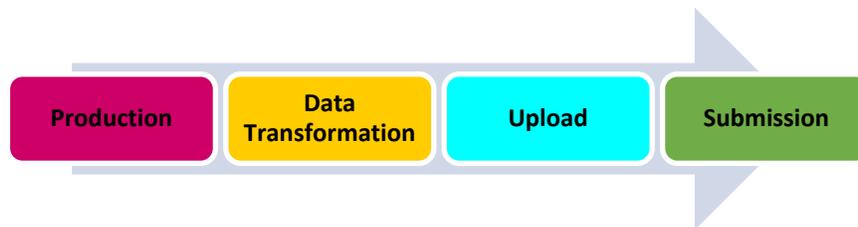
- Faculty Perception of Administrators, formerly Faculty Assessment of Administrator System
- Assisting with the online system used to credential faculty
- Academic Program Inventory
- Assignment of Classification of Instructional Program codes to courses and certificate programs

IR has been the official source of FIU's statistics, providing statistical information to support decision-making processes within all academic and administrative units at FIU, and preparing reports and files for submission to the BOG and other agencies. It is also responsible for data administration, enrollment planning, and strategic planning.

The Office of Retention & Graduation Success identifies barriers to student success and works to eliminate those barriers. This Office helps to carry out the Graduation Success Initiative, primarily by providing "Major Maps" and alerts for students and academic advisors, and information and analyses to departments and decision-makers.

The Associate Vice President of AIM, who is also the University's Data Administrator, reports directly to the Provost and is responsible for gathering data from all applicable units, preparing the data to meet BOG data definitions and requirements, and submitting the data.

The Performance Funding Metrics reporting process flows consist of:



AIM and the Division of PantherSoft Technology work collaboratively to translate the production data, which is sent to staging tables, where dedicated developers perform data element calculations that are based on BOG guidelines and definitions. Once the calculations are completed, the data is formatted into text files and moved to an Upload folder. Users then log into SUDS and depending on their roles, they either upload, validate, or submit the data to the BOG. The PantherSoft Technology team assists with the entire consolidation and upload process. Refer to Figure 1 on page 8.

OBSERVATIONS AND RECOMMENDATIONS

Our audit found no material weaknesses or significant deficiencies in the processes established by the University to report required data to the Board of Governors in support of their Performance Based Funding Metrics and the Emerging Preeminent Metrics. Accordingly, in our opinion, our audit provides an objective basis of support for the University Board of Trustees Chair and President to sign the representations made in the BOG's *Data Integrity Certification* to be filed with the BOG by March 1, 2021.

Our evaluation of FIU's operational and system access controls that fall within the scope of our audit is summarized in the following table:

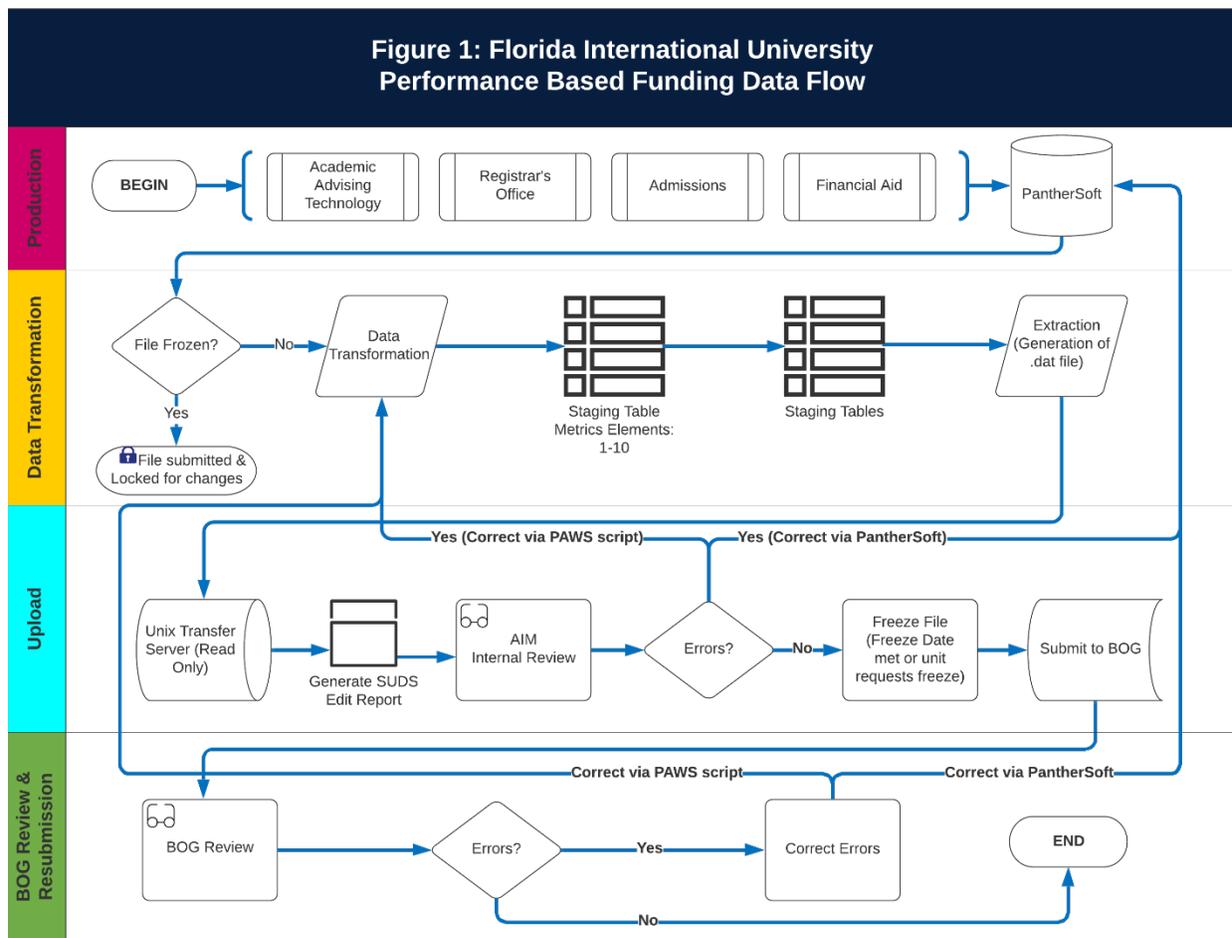
CRITERIA	SATISFACTORY	OPPORTUNITES TO IMPROVE	INADEQUATE
Process Controls	X		
Policy & Procedures Compliance	X		
Effect	X		
Information Risk	X		
External Risk	X		
INTERNAL CONTROLS LEGEND			
CRITERIA	SATISFACTORY	OPPORTUNITES TO IMPROVE	INADEQUATE
Process Controls (Activities established mainly through policies and procedures to ensure that risks are mitigated and objectives are achieved.)	Effective	Opportunities exist to improve effectiveness	Do not exist or are not reliable
Policy & Procedures Compliance (The degree of compliance with process controls – policies and procedures.)	Non-compliance issues are minor	Non-compliance issues may be systematic	Non-compliance issues are pervasive, significant, or have severe consequences
Effect (The potential negative impact to the operations- financial, reputational, social, etc.)	Not likely to impact operations or program outcomes	Impact on outcomes contained	Negative impact on outcomes
Information Risk (The risk that information upon which a business decision is made is inaccurate.)	Information systems are reliable	Data systems are mostly accurate but need to be improved	Systems produce incomplete or inaccurate data which may cause inappropriate financial and operational decisions
External Risk (Risks arising from events outside of the organization's control; e.g., political, legal, social, cybersecurity, economic, environment.)	None or low	Potential for damage	Severe risk of damage

1. Data Systems Design, Process Flow, and Controls

A. Data Process Flow

During the prior year's audit, we tested and verified that processes established by AIM and the Division of PantherSoft Technology provide reasonable assurance that valid data, as defined by the BOG, is gathered, tested, and timely submitted to the BOG. During this audit, we met with AIM and the Division of PantherSoft Technology management and updated our understanding of the processes in place and determined that no significant changes have occurred in the data flow process since the prior audit.

The figure below illustrates how data is captured, analyzed, stored, and distributed to the BOG through SUDS and the information system controls in place.



PantherSoft and AIM collaborated and developed a tool that generates preliminary reports similar to the ones found in SUDS. This tool allows users at functional units more time to work on their file(s) since the BOG edits are released closer to the submission deadline. The purpose of the review is for users at functional units to correct any transactional errors.

The Data Administrator's team routinely reviews error and summary reports to identify and correct any data inconsistencies. The team is responsible for the day-to-day reporting and understands the functional process flows, while the functional units are responsible for their data and understand the technical process flows. Furthermore, for certain files, there are additional PantherSoft queries in place that users run to identify errors or incompatible data combinations.

In addition to the internal FIU reports, the BOG has built into SUDS a data validation process, which through many diagnostic edits, flags errors by levels of criticality. SUDS also provides summary reports and frequency counts that allow for trend analysis. The AIM team reviews SUDS reports and spot-checks records to verify the accuracy of the data. Once satisfied as to the validity of the data, the file is approved for submission.

Conclusion

Based upon the review performed, we observed that data is properly validated and approved prior to submission. We concluded that there were no material weaknesses found in the process that supports data submitted to the BOG.

B. Selected Access Controls Review

AIM implemented an annual review process, which is performed in collaboration with the functional areas and the PantherSoft security team to limit functional unit personnel access to critical data. The annual review included examination of user privileges within the SUDS application and examination of audit log files and production data. The objectives of the annual review are to:

- review user accounts to ensure onboarded and offboarded SUDS users have an associated PAWS² ticket and the existing users' access match their current job description;
- review and reduce access privileges to the production environment to appropriately mitigate least privileged and segregation of duties risks; and
- review log reporting for all metric data files, where appropriate, to ensure the integrity of the data sent to the BOG.

We obtained updated copies of the *AIM-BOG Business Process Manual* and *Annual AIM Review*. We interviewed key personnel and performed sample testing in our analysis and determined that the review performed was adequate and ensured proper controls.

a) SUDS Onboarding and Offboarding

It is the responsibility of the user's supervisor or functional unit lead to notify the security manager when an employee no longer requires SUDS access, and this is done through the creation of a PAWS ticket. Also, during the annual user access review, AIM investigates changes in employment status, and if appropriate, the

² Ticketing system used to submit access requests.

AIM Data Analyst initiates PAWS tickets to add, change, or remove users with access to SUDS.

b) PantherSoft Access Control

We observed there is an effective analysis performed by AIM to determine that functional users, PantherSoft developers, and AIM users have the appropriate levels of access to PantherSoft. Additional testing performed indicated that controls are in place to enforce segregation of duties between PantherSoft and SUDS.

c) PantherSoft Audit Logs

Audit logs capabilities in the production environments, as appropriate, increases the effectiveness of detection controls to help the data administrator mitigate the risks of least privilege access, lack of segregation of duties, and unauthorized activities.

Our testing confirmed that the PantherSoft security team has developed queries that allow functional unit leads and AIM to identify actions that have been taken on relevant fields. The auditing capability is typically limited to a small number of specified fields due to the performance and resource intensive nature of audit logging.

Any field that has the audit flag enabled will be captured in a log. The audit logs are separate tables in PantherSoft that cannot be modified. Any actions taken by a user on an audited field (e.g., logging into the system) is recorded. The actions taken by a user can be reviewed by either the functional unit or the AIM team. Thus, the functional units are responsible for the integrity of data entered in PantherSoft. Similarly, the PantherSoft security team is responsible for ensuring the integrity of the audit logs.

Conclusion

We observed there is an effective analysis performed by AIM to determine that functional users, developers, and AIM users have the appropriate levels of access to PantherSoft and SUDS portal. Similarly, there is a process of monitoring audit logs and communicating with business units to find the root cause of unusual activity. We concluded that there were no material weaknesses found in the AIM review process.

C. Change Management Controls

To understand the process for ensuring complete and accurate submissions, we reviewed controls around the extraction, compilation, and review of data to ensure completeness and accuracy of the submission. Any corrections of data during the generation of SUDS files should go through the change management process. We noted that there were no significant changes since the prior audit. To make a change, a request by an authorized user or unit must be placed via PAWS to unfreeze a frozen file. The unit can then either make the correction via PantherSoft or via a PAWS script. An automated process places the corrected file onto a transfer server, which can only

be accessed by developers with “Read-Only” access. A developer with the “Uploader” role in SUDS can upload the file. AIM then reviews the SUDS report for errors prior to having a “Submitter” send the file to the BOG for review.

Conclusion

PantherSoft Technology staff can make system and program changes following established change management procedures via PAWS. Likewise, functional staff can make changes to data only through the applications, providing compliance with separation of job functions. Our review and analysis found no exceptions in the change management process.

2. Data Accuracy Testing - Performance Based Funding Metrics

This is our seventh audit of the Performance Based Funding Metrics since it became effective in 2014. During our first-year audit, we performed data accuracy testing on all 10 metrics as requested by the BOG. In subsequent years' audits, since internal controls have always been deemed satisfactory, we have limited our data accuracy testing to specific metrics and followed up on any prior year recommendations. Our choice of metrics to audit was based on different factors: audit risk, changes to the metric, and the time elapsed since the metric was last audited. Since 2014, we have audited each of the 10 metrics at least twice, with metrics 4 through 10 three times. Depicted in the following table are the metrics audited by year.

AUDIT COVERAGE OF PBF METRICS			
Audit FY		Metrics Tested	Comment
1.	2014-15	1-10	First year; test of all metrics required by BOG
2.	2015-16	6, 7, 8, & 10	
3.	2016-17	1, 2, 4, & 5	
4.	2017-18	3 & 9	First year of the revised Metric 3
5.	2018-19	4 & 5	First year of the revised Metric 4
6.	2019-20	7 & 10	
7.	2020-21	6, 8, & 9	

At the May 2018 meeting of the *State University Audit Council (SUAC)*, the BOG Chief Data Officer presented a risk rating, ranging from low to high, for each PBF metric. Since there were no prior year audit findings stemming from our data accuracy testing and there have been no significant changes to the metrics affecting this year's audit, we determined to test Metrics 6 and 8, as they were last audited in 2015-16 and Metric 9, as it is one of the metrics identified at the SUAC meeting as high risk. The other three metrics that were rated either "moderately high" or "moderate" were audited during the three more recent audits, without exception. In addition, Metric 9 received the rating of "Excellence" awarding 9 out of 10 points to FIU with a two-point increase (28.6%) since the prior audit. Points are distributed based on a rating of either "Excellence" or "Improvement."

The three PBF metrics tested were as follows:

- Metric 6 – Bachelor's Degree Awarded in Areas of Strategic Emphasis
- Metric 8 – Graduate Degrees Awarded in Areas of Strategic Emphasis
- Metric 9 – Board of Governor's Choice – Percent of Bachelor's Degrees without Excess Hours

We identified the main data files and tables related to the calculations of the three PBF metrics under review, as follows:

- Degrees Awarded file (SIFD), Degrees Awarded table
- Hours to Degree file (HTD), Courses to Degree table

The BOG provided us with the in-scope data elements for each of the metrics subject to our audit testing (see Appendix I – In-scope BOG Data Elements).

We tested the accuracy of the data used for the three metrics by reviewing the corresponding data files, tables, and elements, and tracing them to the source data in PantherSoft. We limited our testing to the PantherSoft data as the objective of our testing was to validate that the data submitted was unabridged and identical to the data contained in PantherSoft, the University’s system of record.

Metric 6 – Bachelor’s Degrees Awarded in Areas of Strategic Emphasis

Metric 8 – Graduate Degrees Awarded in Areas of Strategic Emphasis

The data for Metrics 6 and 8 is generated by the BOG from the Degrees Awarded file (SIFD) submitted by the University.

Metric 6, Bachelor’s Degrees within Programs of Strategic Emphasis, is based on the number of baccalaureate degrees awarded within the programs designated by the Board of Governors as “Programs of Strategic Emphases”. A student who has multiple majors in the subset of targeted Classification of Instruction Program codes will be counted twice.

Metric 8, Graduate Degrees within Programs of Strategic Emphasis, is based on the number of graduate degrees awarded within the program designated by the Board of Governors as “Programs of Strategic Emphasis”. A student who has multiple majors in the subset of targeted Classification of Instruction Program codes will be counted twice.

We selected a sample of 30 students (baccalaureate and graduate degrees) and verified that the data submitted to the BOG in the Fall 2019 SIFD file was the same as the data contained in PantherSoft student records. We verified the accuracy of the data in the six elements relevant to the Degrees Awarded file without exception.

In addition, as part of our testing of the SIFD file, we reconciled the number of students and degrees awarded reported to the BOG with the records maintained by the Office of the Registrar. The SIFD file contained 5,424 degrees awarded, in which 40 were out-of-term degrees.

We examined 12 of the 40 out-of-term degrees to understand why they were posted late and found that the students’ graduation approval was received late from the department or the degree was awarded late by the Office of the Registrar. The Division of Information

Technology has an algorithm in place to include late degrees from three terms prior, as such, these degrees were appropriately included and reported to the BOG.

In addition, we found 86 students not reported to the BOG but were included in the Registrar's records. However, of these students, 77 were subsequently reported in Spring 2020 as out-of-term degrees, and another six students were reported in Summer 2020. The remaining three student's degree dates were posted in PantherSoft as of Fall 2020 and should be included in the Fall 2020 submission.

Additionally, we found one (1) student was reported twice for the same degree during Fall 2019 and Spring 2020. AIM explained that the degree was rescinded, and a resubmission was not required by the BOG. We reviewed appropriate support where the BOG approved the rescinded degree for the student, without exception.

Conclusion

Our testing of the SIFD data files found no differences between the information submitted to BOG and the data in the PantherSoft system relating to the relevant elements for Metrics 6 and 8.

Metric 9 - Percent of Bachelor's Degrees without Excess Hours

The data for Metric 9 is generated by the BOG from the Hours to Degree file (HTD) submitted by the University.

Metric 9, Percent of Bachelor's Degrees Without Excess Hours, is based on the percentage of baccalaureate degrees awarded within 110% of the credit hours required for a degree based on the Board of Governors Academic Program Inventory. This metric excludes the following types of student credits: accelerated mechanisms, remedial coursework, non-native credit hours that are not used toward the degree, non-native credit hours from failed, incomplete, withdrawn, or repeated courses, credit hours from internship programs, credit hours up to 10 foreign language credit hours, and credit hours earned in military science courses that are part of the Reserve Officers' Training Corps (ROTC) program. Starting in 2018-19, the calculation for this metric included a new type of statutory exclusion of up to 12 credit hours for students who graduated in four years or less. This metric does not report the number of students who paid the "Excess Hour Surcharge."

To verify that the data submitted in the HTD 2018-2019 file to the BOG was accurate, we selected a sample of 20 students (three of whom were active-duty military) and verified that the data provided to the BOG was the same as the data contained in PantherSoft student records. We verified that the data in the seven elements relevant to the metric in the Degrees Awarded file agreed to the information in PantherSoft.

Notwithstanding the agreement of the data in the HTD file and PantherSoft, we did find three instances during our testing that suggested the need for process improvements to some ancillary processes that could have a bearing on the integrity of some data maintained in PantherSoft. Specifically, two student's data were inconsistent with

PantherSoft records and one military student's status was incorrectly reflected in PantherSoft. However, these instances did not impact the metrics calculation. Notwithstanding this determination, we have communicated these matters in a separate letter dated February 1, 2021, to management for their consideration and follow up.

Conclusion

Our testing of the HTD data files found no significant differences between the information submitted to the BOG and the data in PantherSoft relating to the relevant elements for Metric 9. However, we have referred certain matters related to some ancillary university processes to management for their consideration and follow up.

3. Data Accuracy Testing - Emerging Preeminent Metrics

In 2020, the University achieved seven of the 12 Preeminence metrics, earning it the Emerging Preeminent designation. Three of the seven (7) metrics were tested in our prior year's audit; therefore, we selected the remaining four metrics for testing as follows:

- Metric 1 – Average GPA and SAT Score for Incoming Freshman in Fall Term
- Metric 5 – National Academy Memberships
- Metric 8 – National Ranking in Research Expenditures
- Metric 10 – Doctoral Degrees Awarded Annually

In December 2019, the BOG issued the *Preeminent Metrics Methodology Document*, which we used in our testing.

We tested the accuracy of the data used for the four metrics by obtaining the respective University files and reviewing them against the data provided to the respective organizations associated with each metric, that is, the National Science Foundation (NSF) and National Academy of Sciences, Engineering, and Medicine. In addition, where applicable, we agreed the information to the data in PantherSoft.

Metric 1 – Average GPA and SAT Score for Incoming Freshman in Fall Term

An average weighted grade point average of 4.0 or higher on a 4.0 scale and an average SAT score of 1800 or higher on a 2400-point scale or 1200 or higher on a 1600-point scale for fall semester incoming freshmen, as reported annually.

To test the accuracy of the 4.2 average GPA reported for this metric, we obtained the ADM – Applicants Admit File, identified the first-time-in-college (FTIC) students who were newly admitted and registered during the Fall 2019 term, and recalculated that group's average GPA of 4.2, without exception. Student's with non-traditional or unavailable GPA information were appropriately excluded from the calculation.

To confirm the accuracy of the 1292 average SAT score reported for this metric, we obtained a BOG report of the redesigned/concorded average SAT scores derived from SAT score data provided by FIU. Using this report, we recalculated the average SAT score of 1292, without exception. In addition, we selected a sample of 30 students and confirmed the SAT scores in the report agreed to the students' records in PantherSoft, without exception.

Metric 5 – National Academy Memberships

Six or more faculty members at the state university who are members of a national academy, as reported by the Center for Measuring University Performance in the Top American Research Universities (TARU) annual report or the official membership directories maintained by each national academy. (National Academy of Sciences, Engineering, & Medicine)

To test the accuracy of the data related to National Academy memberships, we confirmed the seven memberships the University reported via the academy directories. Four faculty were members of the National Academy of Medicine and three were members of the National Academy of Engineering.

Metric 8 – National Ranking in Research Expenditures

A top-100 university national ranking for research expenditures in five or more science, technology, engineering, or mathematics fields of study, as reported annually by the National Science Foundation (NSF).

Once a year, the BOG's Office of Data & Analytics staff download research expenditure data from the National Science Foundation's annual Higher Education Research and Development survey using the National Science Foundation's National Center for Science and Engineering Statistics (NCSES) online data tool. The NSF identifies eight broad disciplines within Science and Engineering: Computer Science, Engineering, Environmental Science, Life Science, Mathematical Sciences, Physical Sciences, Psychology, and Social Sciences. The BOG's Office of Data & Analytics staff analyze total research expenditures by fiscal year for each public and private four-year institution in the country by broad discipline and determine the rankings for each State University System institution for each of the broad disciplines.

To test the accuracy of the data related to the FIU's national ranking in research expenditures, we reviewed the national rankings on the NSF reports on the NCSES online data tool. We confirmed that FIU was ranked in the top 100 in six of the eight broad disciplines as reported in the metric.

Metric 10 – Doctoral Degrees Awarded Annually

Four hundred or more doctoral degrees awarded annually, including professional doctoral degrees awarded in medical and health care disciplines, as reported in the Board of Governors annual Accountability Plan.

To test the accuracy of the data reported, we reviewed the SIFD reports for the academic year 2019 and identified students who obtained a Doctorate or Medical Doctorate degree. The total degrees awarded amounted to 433, which agrees to the amount reported for the metric.

Conclusion

Our testing of the Emerging Preeminent metrics found the data reported to be accurate and consistent with the definitions and methodology as outlined in the BOG's *Preeminent Metrics Methodology Document*.

4. PBF Data File Submissions and Resubmissions

A. Data File Submissions

To ensure the timely submission of data, AIM used the due date schedule provided by the BOG as part of the SUS data workshop to keep track of the files due for submission and their due dates. AIM also maintains a schedule for each of the files to be submitted, which includes meeting dates with the functional unit leads, file freeze date, file due date, and actions (deliverables) for each date on the schedule. We used data received directly from the BOG Office in addition to data provided by AIM to review the timeliness of actual submittals.

The following table reflect the original due dates and original submission dates of all relevant Performance Based Funding Metrics files during the audit period:

File	File Submission	Period	Original Due Date, Including Extensions	Original Submission Date
ADM	Admissions	Summer 2019	09/20/2019	09/20/2019
SIF	Student Instruction	Summer 2019*	09/27/2019	09/27/2019
ADM	Admissions	Fall 2019*	10/14/2019	10/14/2019
SFA	Student Financial Aid	Annual 2019	10/11/2019	10/11/2019
SIFD	Degrees Awarded	Summer 2019	10/04/2019	10/04/2019
SIFP	Student Instruction Preliminary	Fall 2019	10/21/2019	10/21/2019
EA	Expenditure Analysis	Annual 2019	11/04/2019	11/04/2019
HTD	Hours to Degree	Annual 2019	11/08/2019	11/08/2019
SIF	Student Instruction	Fall 2019	01/17/2020	01/17/2020
RET	Retention	Annual 2019	01/31/2020	01/31/2020
SIFD	Degrees Awarded	Fall 2019	01/27/2020	01/27/2020
ADM	Admissions	Spring 2020*	03/02/2020	03/02/2020
SIF	Student Instruction	Spring 2020*	06/26/2020	06/26/2020
SIFD	Degrees Awarded	Spring 2020	07/10/2020	07/10/2020

* The indicated file was subsequently resubmitted and is reviewed on the following pages.

B. Data File Resubmissions

We obtained the list of resubmissions since the last audit from the BOG staff. The University's Data Administrator described the nature and frequency of the four required resubmissions and provided correspondence between the BOG and the University related to the data resubmissions. AIM examined the correspondence to identify lessons learned and to determine whether any future actions can be taken that would reduce the need for resubmissions.

The Data Administrator has acknowledged that although their goal is to prevent any resubmissions, they are needed in cases where inconsistencies in data are detected by either University or BOG staff after the file has been submitted. According to the Data Administrator, a common reason for not detecting an error before submission is that some inconsistencies only arise when the data is cross validated among multiple files.

To determine the frequency of the resubmissions, we reviewed a list provided by the BOG staff for all files submitted pertaining to the 10 PBF metrics. The University submitted 14 files with due dates between September 1, 2019, and August 31, 2020, of which four files required resubmission.

The following table describes the four files resubmitted and AIM's reason for the resubmission.

	File Submission	Period	Original Due Date	Original Submission Date	Resubmission Date
	Student Instruction	Summer 2019	09/27/2019	09/27/2019	10/16/2019
No. 1	AIM Reason for Resubmission: New admission element 02089 "First Time in College (FTIC) Alternative Admin Flag" was implemented effective Summer 2019. The element is also reported in the SIF file. This new element needed to be applied retroactively in the submission. In other words, if the student was admitted prior to Summer 2019, we still needed to retrofit our data and report it accordingly. Our team reached out to the BOG seeking clarification as to how to treat students admitted prior to Summer 2019. Although the BOG provided a response, our interpretation of their instructions did not match their expectations and we needed to resubmit.				
	Admissions	Fall 2019	10/14/2019	10/14/2019	10/18/2019
No. 2	AIM Reason for Resubmission: BOG no longer accepts an explanation for students admitted with a GPA greater than 5.0. For many years, the BOG has been accepting an explanation. However, starting in the Fall 2019 submission, the BOG decided an explanation was not allowed and a resubmission was necessary. This required for our institution to implement additional program logic that converted the High School GPA for the students whose GPA was greater than 5.0 to a default value of 5.0 in order to comply with the limitation in BOG reporting requirements.				

File Submission	Period	Original Due Date	Original Submission Date	Resubmission Date
Admissions	Spring 2020	03/02/2020	03/02/2020	05/29/2020

No. 3 **AIM Reason for Resubmission:** For a number of submissions, the BOG accepted an explanation for Edit 5396. This edit was revised during the 2019-20 cycle as it was previously edit 5321. Basically, the reason for the resubmission is that the BOG no longer accepts an explanation for the error. In the past, in all past submissions, we had been allowed to provide an explanation for all students listed as Cancelled After Admission. These students were originally provisionally admitted but subsequently got cancelled. The BOG has indicated we must first determine if the student was admitted yes or no (Y/N). If the student was admitted (Y) and the student is missing admission requirements, then they need to be reported as an alternative admit, even if there was an admission cancellation.

Student Instruction	Spring 2020	06/26/2020	06/26/2020	07/22/2020
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No. 4 **AIM Reason for Resubmission:** As a result of COVID-19, our students were allowed to request for their final class grade to be submitted as a pass or fail (P/F) instead of a formal letter grade. Upon completion of their internal review, the BOG requested we recheck the file because there was a drop in the credit hours earned. Our team investigated this issue to find probable causes and then consulted with the IT department to validate their findings. There was a problem with the IT program logic that populates Term Credit Hours Earned (01089) element. It was not counting the (P) grades as earned credits. IT corrected the problem in the logic and AIM validated the data and resubmitted the file with the correct calculations.

In all instances observed, the BOG staff authorized the resubmission by reopening the SUDS system for resubmission. Furthermore, the number of resubmissions decreased from five files in the prior reporting cycle to four files in the current reporting cycle.

Conclusion

Our review disclosed that the process used by the Data Administrator provides reasonable assurance that complete, accurate, and timely submissions occurred. We noted no reportable material weaknesses or significant control deficiencies related to data file submissions or resubmissions. Moreover, the resubmissions were authorized and accepted and the reasons for them continue to be addressed.

5. Review of University Initiatives

We obtained the following list of the University initiatives that are meant to bring the University's operations and practices in line with SUS Strategic Plan goals:

- Implemented E&G revenue reallocation model
- Implemented faculty reallocation model for academic units
- Provided greater access to on-demand analytics relevant to the metrics
- Implemented student level graduation benchmarking
- Implemented student attendance and midterm progress monitoring and outreach
- Integration of career and academic advising
- Strategic enrollment planning via Noel Levitz
- Created an Office of Scholarships and Academic Program Partners to support all colleges in their efforts to apply foundation scholarship funds to student success and enrollment goals
- Expanded merit scholarship opportunities and initiated two new scholarships – “Jumpstart FIU” and “Panther Achievement Award”
- Implemented centralized coordination and local deployment for student recruitment efforts
- Established centralized retention, graduation, and student success outreach
- Implemented graduation and retention predictive models
- Working with EduNav and FIU's Business Intelligence team to replicate what Ad Astra was not able to produce regarding course scheduling optimization.

Conclusion

None of the initiatives provided appear to have been made for the purposes of artificially inflating performance goals.

APPENDIX I – IN-SCOPE BOG DATA ELEMENTS

No.	Metric	Definition	Submission/Table/Element Information	Relevant Submission
6	Bachelor's Degrees within Programs of Strategic Emphasis	This metric is based on the number of baccalaureate degrees awarded within the programs designated by the Board of Governors as 'Programs of Strategic Emphasis'. A student who has multiple majors in the subset of targeted Classification of Instruction Program codes will be counted twice (i.e., double-majors are included).	Submission: SIFD Table: Degrees Awarded Elements: 01082 – Degree Program Category 01083 – Degree Program Fraction of Degree Granted (This field is a summed field) 01045 – Reporting Institution 01412 – Term Degree Granted 01081 – Degree Level Granted 02015 – Major Indicator	Summer 2019 October 4, 2019 Fall 2019 January 27, 2020 Spring 2020 July 10, 2020
8	Graduate Degrees within Programs of Strategic Emphasis	This metric is based on the number of graduate degrees awarded within the programs designated by the Board of Governors as 'Programs of Strategic Emphasis'. A student who has multiple majors in the subset of targeted Classification of Instruction Program codes will be counted twice (i.e., double-majors are included).	Same as No. 6 above.	Summer 2019 October 4, 2019 Fall 2019 January 27, 2020 Spring 2020 July 10, 2020
9	Percent of Bachelor's Degrees Without Excess Hours	This metric is based on the percentage of baccalaureate degrees awarded within 110% of the credit hours required for a degree based on the Board of Governors Academic Program Inventory. This metric excludes the following types of student credits (i.e., accelerated mechanisms, remedial coursework, non-native credit hours that are not used toward the degree, non-native credit hours from failed, incomplete, withdrawn, or repeated courses, credit hours from internship programs, credit hours up to 10 foreign language credit hours, and credit hours earned in military science courses that are part of the Reserve Officers' Training Corps (ROTC) program). Starting in 2018-19, the calculation for this metric included a new type of statutory exclusion of up to 12 credit hours for students who graduated in four years or less. This metric does not report the number of students who paid the "Excess Hour Surcharge" (1009.286, FS).	Submission: HTD Table: Courses to Degree Elements: 01104 – Course Section Type 01484 – Course System Code 01485 – Course Grouping Code 01488 – Credit Hour Testing Method 01489 – Credit Hour Usage Indicator 01459 – Section Credit (Credit Hours) 02065 – Excess Hours Exclusion	2018-2019 Academic Year November 8, 2019

Definition Source: State University Database System (SUDS).

APPENDIX II – OIA CONTACT AND STAFF ACKNOWLEDGMENT

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Stephanie Price (auditor in-charge);
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Vivian Gonzalez (supervisor and reviewer).

Definition of Internal Auditing

Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.