

Washington University Investment Management Company

ANNUAL REPORT

2018–2019



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Endowment At-A-Glance

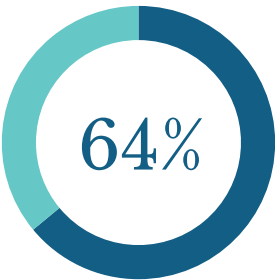
7.4%
FY19 RETURN

\$8.1 Billion
ENDOWMENT MARKET
VALUE AT 6/30/19
12TH LARGEST PRIVATE
U.S. UNIVERSITY
ENDOWMENT

\$121 Million
NEW ENDOWED GIFTS
IN FY19

9.1%
10-YEAR
ANNUALIZED RETURN

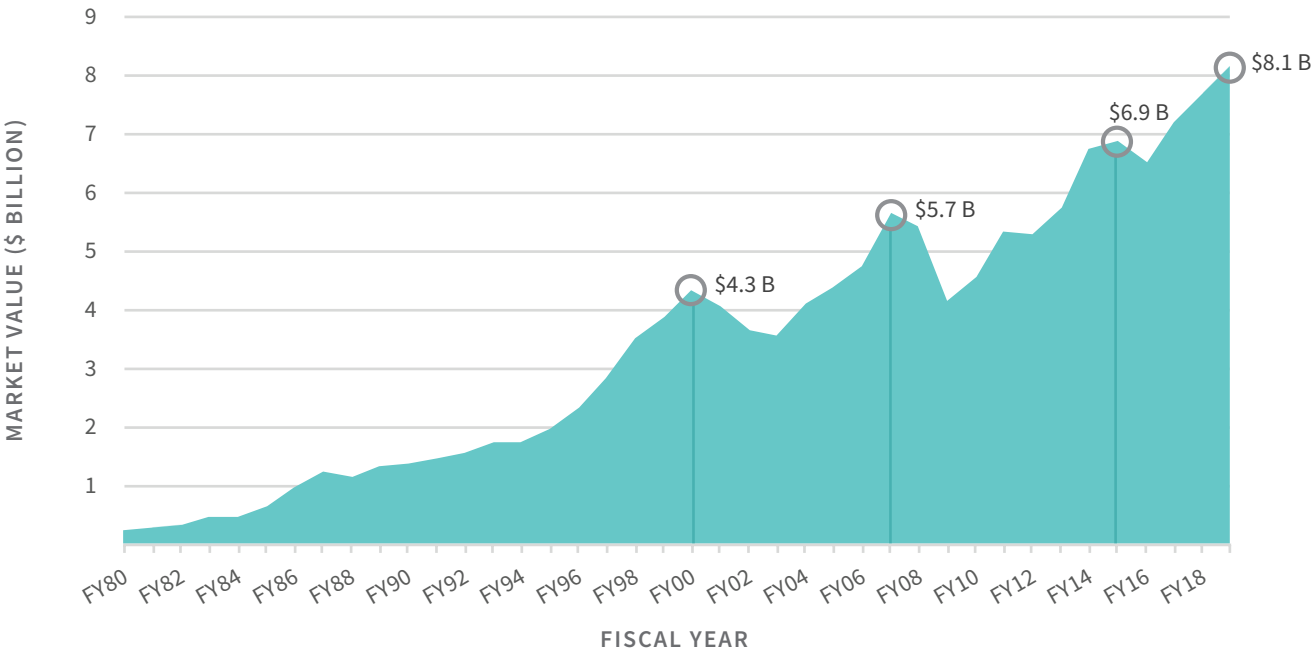
3,631
TOTAL NUMBER OF
ENDOWED FUNDS



ENDOWED FUNDS WITH
DONOR RESTRICTIONS

\$341 Million
ENDOWMENT PAYOUT
IN FY19

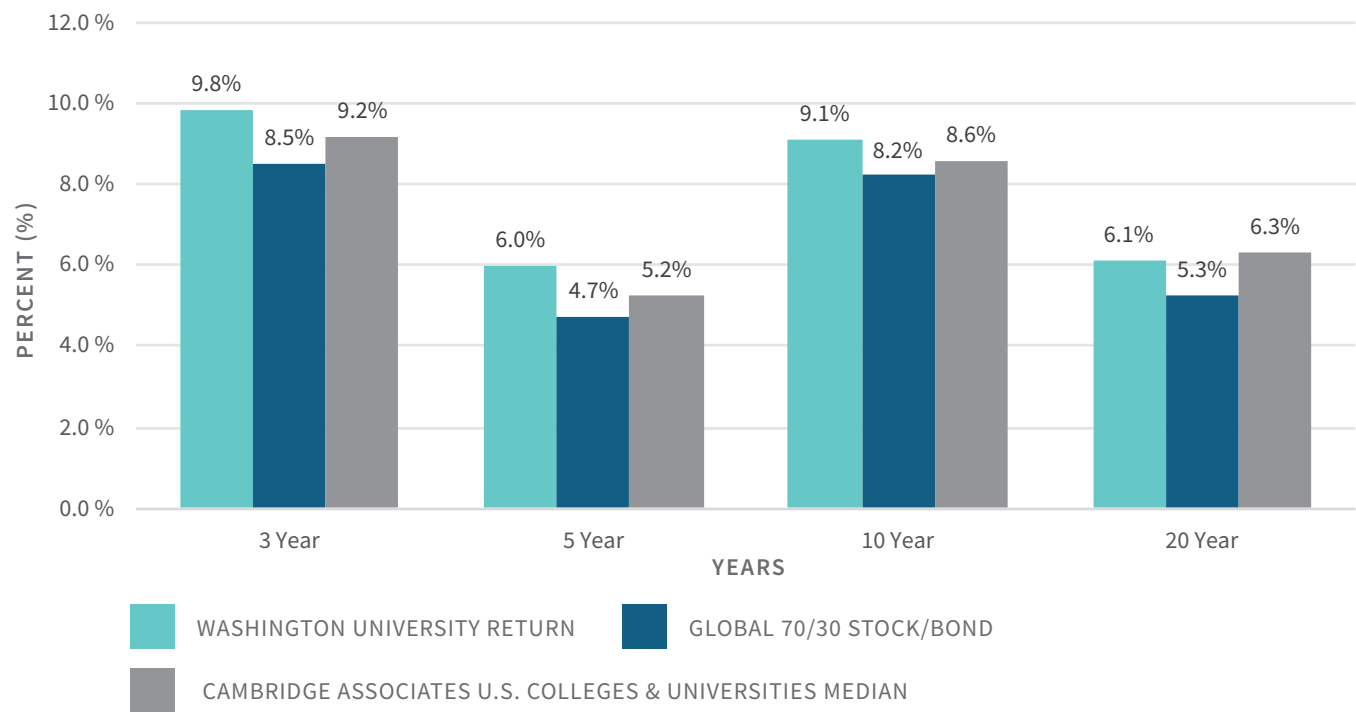
ENDOWMENT MARKET VALUE



MULTIYEAR PERIODS

	FY15	FY16	FY17	FY18	FY19
MARKET VALUE (\$ MILLION)	\$6,889	\$6,527	\$7,215	\$7,687	\$8,130
ANNUAL RETURN (% PERCENT)	4.4%	-3.3%	11.3%	10.9%	7.4%
ANNUAL SPENDING (PAYOUT) (\$ MILLION)	\$266	\$287	\$306	\$323	\$341

ANNUALIZED RETURNS



FY19 ENDOWMENT DISTRIBUTION BY USE

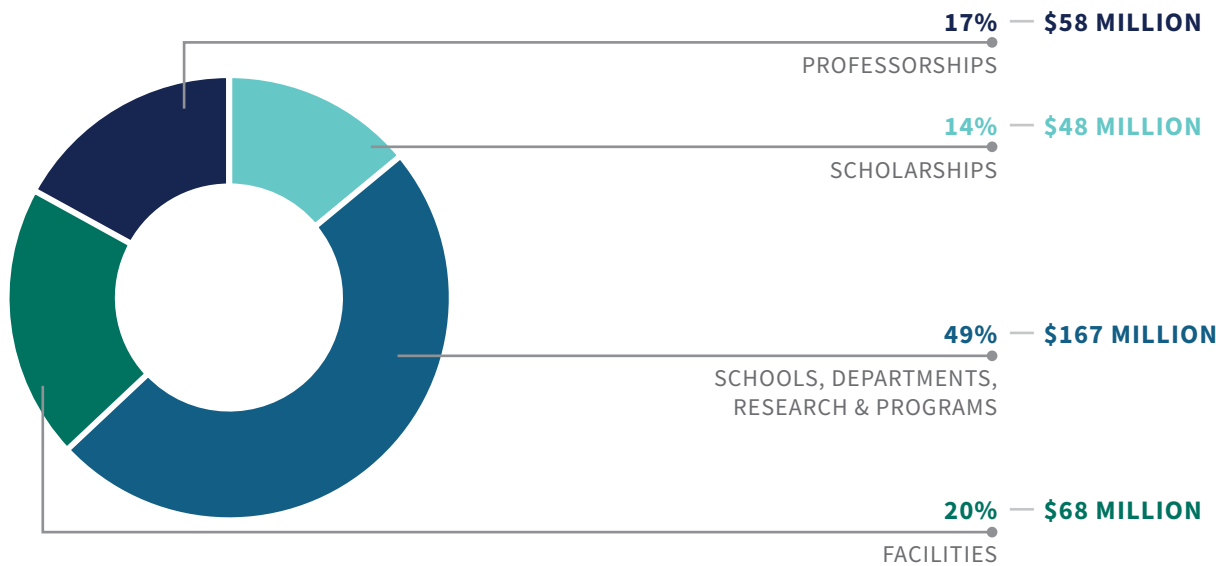




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WUIMC Board of Directors and Staff



Message from the Chancellor

Mitigating the effects of cancer. Finding a cure for Alzheimer's disease. Providing scholarships to talented students who couldn't otherwise afford to attend Washington University. Funding students' opportunities to study abroad, participate in athletics, and gain valuable service and leadership experiences. Supporting faculty members who are helping solve child malnutrition. Paying the salary of a distinguished professor who is diligently addressing the impact of climate change. Another who is engaging in scholarship about Latin American culture and identity. Still another who is shedding light on the racial, health, and economic divide in St. Louis.

When you think about Washington University's endowment, it is my greatest hope that these are the things that come to mind. In fact, the aforementioned examples serve as merely a starting point in terms of all our endowment is capable of supporting. And yet, there are some misconceptions about what our endowment does, how it is managed, and how we utilize the funds to invest in our mission — a mission we plan to sustain forever.

Through this annual report, we hope you'll gain a better understanding of these and other areas as we highlight our endowment's growth and accomplishments over the past fiscal year. We also hope you'll gain a glimpse into our endowment's role as a vital strategic force, used to advance the greater good.

While state-of-the-art buildings and facilities are necessary to support our bold mission, more importantly, so are the people! And that's where our endowment plays the biggest role. It's a solid and sustainable investment in our people — the exceptional students who are here because of scholarship support; the highly talented endowed professors we attract to teach and conduct research; and the incredibly passionate staff who oversee some of our most impactful programs. Without it, we simply could not achieve even a sliver of what we're currently capable.



*“We wouldn’t
be where we are
today without
generosity and
the tradition of
philanthropy,
which serves as a
defining quality
of this great
institution.”*

At WashU, we are extremely well-positioned with an \$8.1 billion endowment — one of the strongest in U.S. higher education. We have such a healthy endowment mainly because of our long and vibrant legacy of financial support from donors who believe wholeheartedly in our mission and who have faithfully entrusted their resources into our care. We wouldn't be where we are today without generosity and the tradition of philanthropy, which serves as a defining quality of this great institution. And now, we have a significant responsibility to be the best possible stewards of those resources.

To that end, in order to achieve some of our most ambitious goals and aspirations for the university — especially as it relates to our commitment to academic distinction, educational access, and our role and impact in St. Louis and for St. Louis — we must focus on growing our endowment through investment returns and gifts and doing even more to invest in the people and programs that make this university what it is today and what we hope it will be tomorrow. By doing so, we can continue to be a place of distinction in education, research, and patient care for centuries to come.

I, for one, am proud of all we've accomplished this past year, our commitment to long-term investing, and our strong position for an even brighter future. By reading this report, I hope that you'll share the same sense of pride and that you'll commit to join alongside us as we bolster the Washington University legacy. Thank you for taking the time to learn more, and as always, thank you for all you do to support our mission.

Andrew D. Martin
Chancellor



Universities as Forces for Good

Universities change the world. They are forces for good, opening doors to the discovery and dissemination of new knowledge and protecting the freedom of inquiry through research, teaching, and learning. They change lives and create leaders.

The most prestigious research universities in the world stand out from other change-making organizations in one especially critical way: they last for centuries. Corporations, hospitals, institutes, and even world governments come and go, but among the longest-lasting and most enduring of the world's entities are universities. They last because the thirst for knowledge never slackens and the need to create the next generation of leaders, healers, innovators, teachers, and artists persists. Universities have been — and continue to be — the chief drivers of creativity and learning in the world.

Since 1853, Washington University has left its ever-growing mark on the world and on its home community of St. Louis. That trajectory of growth and impact shows no sign of slowing, and its 15th chancellor, Andrew D. Martin, set the stage for the next era of growth at his inauguration

on October 3, 2019, announcing three bold goals to guide the future of the university:

Increasing academic distinction as it continues to be a world-renowned leader in education, research, and patient care;

Ensuring access to a Washington University education for the world's most talented students regardless of their background or previous opportunities; and

Expanding the university's connection, role, and impact in and for the St. Louis region.

Washington University is part of the great legacy of research universities that are changing the world and their own communities by advancing cures for the world's most deadly diseases, reducing human suffering and poverty, advancing education and learning for students at all levels, and pursuing interdisciplinary research that will lead to alternative forms of energy and more affordable housing.

Message from the WUIMC Board of Directors

Eric B. Upin, WUIMC Executive Board Chair

Over the past five years, the Washington University Investment Management Company (WUIMC) Board of Directors focused on improving endowment performance, building a strong and diverse investment organization, and developing the governance and alignment to foster long-term consistency and success. These initiatives first began under former WUIMC Board Chair David W. Kemper and former Chancellor Mark S. Wrighton, and they have continued under the leadership and great support of Chancellor Andrew D. Martin and the Board of Trustees.

The results of these efforts culminated in a new strategic asset allocation policy, increased exposure to private asset classes (private equity, venture capital, and real estate), a transformed roster of external investment managers, and clear performance goals. Specifically, the performance goals are: 1) to generate returns above a passive, indexed stock/bond portfolio of 70 percent global equities and 30 percent global bonds (also known as alpha); 2) to exceed the median performance of the top 20 private university endowments by size; and 3) to produce returns at or above the annual payout rate plus inflation over the long term.

A key milestone was the hiring of our new chief investment officer, Scott L. Wilson. Since joining WUIMC in November 2017, Scott and the team have worked tirelessly, making significant changes and progress. Our recent 2019 fiscal year performance results are quite encouraging, showing significant improvements in performance versus benchmarks and peers.

University endowments and endowed gifts play an essential and vital role — supporting educational scholarships (affordability, access, and inclusion); endowed professorships (providing the ability to attract top faculty); fellowships; critical research (cancer, degenerative brain diseases, climate/carbon, and a myriad of others); and serving as a key pillar of financial strength and stability. Endowment portfolios are perpetual/intergenerational pools of capital and are quite unique — where time horizon and long-term compounding can be substantial competitive advantages. Modest amounts of additional returns (alpha) over long periods of time (10–25 years), are truly profound — where the power of compounding can produce a substantially larger endowment portfolio to fund future initiatives.

This is the first WUIMC Endowment Annual Report in this format. Our goal is to increase communication about the endowment's performance, positioning, and financial impact and support for the university. This also marks the first time we are sharing our Statement of Investment Principles and providing high-level texture on the endowment's exposure to positive impact and socially responsible investments. Over 20 percent of the total portfolio is invested in positive impact investments, while being substantially underweight to the energy sector with near-zero exposure to coal businesses. These exposures will vary from year to year, based on decisions made by our external investment managers, but we do not foresee material changes to this posture at this time. We recognize the depth and importance of this investing movement and the paramount challenges of carbon emissions and climate change.

Although early performance results are promising, we are resolutely focused on continuing to build an endowment portfolio and investment organization that serves Washington University with strong outperformance and compounding over the long term — ensuring the ability to consistently meet annual payout distributions and the capability to support the university's strategic ambitions and aspirations moving forward.



Eric B. Upin, *Executive Chair*

Andrew M. Bursky

David W. Kemper

John F. McDonnell

Andrew D. Martin, *ex officio*

Andrew E. Newman, *ex officio*

Craig D. Schnuck

Gary M. Sumers

Message from the Chief Investment Officer

The team of professionals at the Washington University Investment Management Company (WUIMC) knows that its job is about more than just making good investments. The WUIMC team recognizes the importance of the endowment in financially supporting Washington University, and it approaches this role with seriousness of purpose. We are mindful that our ultimate responsibility is to build and manage a perpetual investment portfolio in support of the university's critical and interlocking missions of teaching, research, and patient care for current and future members of the Washington University community. Since my arrival in November 2017, we have been working to transition and enhance the investment portfolio to further advance this objective.

This transition process has involved a thorough assessment of all investment holdings in light of our investment principles and a movement to a significantly more concentrated portfolio across all asset classes. We believe a more concentrated portfolio creates increased exposure to those individual investment positions in which our managers have the highest levels of conviction. While this approach to portfolio construction may bring a modest increase to volatility, we believe that the added concentration will augment long-term investment returns for the university and its long-term commitment to change and improve the world. Although we have seen some early signs of success, with increased concentration, our short-term performance becomes less meaningful and we continue to focus on long-term results. Our ultimate measure of success will be the endowment's ability to provide support for both the current needs of the university, as well as future generations of students, faculty, and staff.



“My first two years as chief investment officer have confirmed that Washington University is a unique and inspirational place, filled with talented people.”

As we work to build a global investment portfolio, the WUIMC team has traveled many miles in search of compelling investment opportunities for the university's capital. We have created deep relationships with our partners, who must demonstrate a commitment to a rigorous and repeatable investment process and possess certain investment skill and judgment. The WUIMC team is also seeking investment opportunities where valuations are reasonable and capital is less abundant, which has led us to explore both new asset classes and geographies outside traditional markets, including emerging and frontier markets. Wherever we find good investments and partners, we hope for long and lasting relationships.

While we acknowledge that the work of transitioning the managed endowment pool (MEP) is not yet complete, we are encouraged by our progress over the past two years. Furthermore, although we believe that the managed endowment pool's 7.4 percent one-year investment return for fiscal year 2019 reflects the changes to the portfolio's construction, we continue to pursue the long-term growth of the university's investment assets in favor of short-term gains. Investment performance can and should only be judged over the course of a market cycle.

My first two years as chief investment officer have confirmed that Washington University is a unique and inspirational place, filled with talented people pursuing excellence in many different fields of endeavor. The WUIMC team and I are grateful for the opportunity to share in advancing the mission of this special institution as it continues to impact and change the world.

Scott L. Wilson
Chief Investment Officer



GEORGE F. MILLER
LABORATORY OF CHEMISTRY

BRYAN

Endowment 101: Securing Washington University in Perpetuity

At its heart, Washington University is about its people — students, faculty, and staff — who do the very best work possible, grow personally and professionally, and help solve the world’s most puzzling problems. Washington University’s endowment enables a solid and sustainable investment in those people.

From its beginnings in the mid-19th century, Washington University has been a careful steward of its endowment resources and of the wishes of those who have contributed to them. For a great part of its history, the endowment has provided vital support for scholarships, professorships, academic programs, libraries, research, capital projects, and health care. Without the endowment, the university simply wouldn’t be able to achieve its current capabilities and accomplishments.

But the work and progress undertaken at a university rarely happens very quickly. Some solutions require generations of people all pulling in the same direction. For that reason, universities take a long view when

it comes to planning, growth, and financial support. That’s why the endowment is so important. Like the university itself, the endowment is invested for the long term, to allow the university to operate and grow over succeeding generations.

In order for Washington University to achieve its ambitious goals and aspirations — especially commitments to academic distinction, educational access, and its role and impact in St. Louis and for St. Louis — it must focus on growing the endowment and doing even more to invest in the people who make this university what it is today and what it will be tomorrow. As Chancellor Martin noted in his inaugural address, this kind of sustained progress will not be inexpensive, and it is going to take a concerted, strategic, and financial effort to ensure Washington University continues to be a place of distinction in education, research, and patient care for centuries to come.

The following are answers to some commonly asked questions about Washington University’s endowment and how it is managed and invested.

What exactly is an endowment?

The endowment is a pool of capital, invested across various asset classes, for the benefit of Washington University. Pursuant to the Endowment Spending Policy, each year a specified amount of endowment dollars is distributed to the university to support its operations. The ultimate goal of the endowment is to grow its assets through prudent investments in order to support the mission of the university into perpetuity.



Who manages the endowment and how is it invested?

The Washington University Investment Management Company (WUIMC) was established in 2006 and manages the university's endowment and related assets. The university's Board of Trustees has delegated oversight for the university's investment policy and strategy to WUIMC's board of directors. The investment policy and its accompanying strategy are designed to maximize long-term returns at an acceptable level of risk.

Operating as a division within the legal framework of the university, WUIMC is led by a chief investment officer and a team that consists of talented investment and operations professionals who share the common goal of financially supporting the mission of the university in perpetuity.

What is the difference between restricted and unrestricted endowment?

Washington University's endowment is actually a collection of more than 3,600 individual funds. Most of these funds have their own set of restrictions and guidelines for how they can be used based on the wishes of the donor who established the fund. Because of these restrictions, endowment funds cannot be redirected to pay for projects, ideas, or positions contrary to the original purpose. For example, an endowment gift that has been designated by the donor to fund scholarships for students or for a specific area of study must be used for that designated purpose.

However, some contributions to the endowment are unrestricted. These gifts can be used at the discretion of the university and are used to supplement other sources of funds in the general operating budget.

What is the current value of the endowment?

Due to the investment of the endowed funds as well as generous contributions from alumni, parents, and friends of the university, on June 30, 2019, the market value of the endowment was \$8.1 billion, making it one of the top 20 university endowments in the country.

How are earnings from the endowment distributed back to the university?

The WUIMC board has responsibility for the endowment spending policy and approves the annual spending rate.

The endowment spending policy states that (1) the goal is to increase the endowment payout every year by at least the rate of inflation, calculated as the three-year average of the Higher Education Price Index (HEPI); and (2) the computed spending rate must fall within a range of 3 to 5.5 percent of the five-year average market value per unit of the endowment. The use of a five-year average market value serves to dampen swings in the annual endowment payout during volatile market environments.

The annual spending rate is approved near the end of the calendar year, allowing schools to incorporate the spending rate in their budget planning for the next fiscal year.

Much of that annual payout is already earmarked for specific and strategic purposes, such as faculty and staff salaries, programs and initiatives, financial aid, operating costs, capital projects, research, and more.

The careful and prudent management of endowed funds enables the university to grow the value of the endowment in order to meet both its current and future financial needs.

Statement of Investment Principles: Securing and Funding the Promise of Washington University

Washington University's endowment plays a fundamental and strategic role in supporting and advancing the university's mission to be a leading educational, research, and patient care institution. Endowed gifts and programs from generous alumni and donors support scholarships and tuition assistance (increasing affordability, access, and inclusion); endowed professorships and fellowships (providing the ability to attract and retain top faculty and researchers); and critical research programs (addressing cancer, degenerative brain diseases, climate/carbon, and many other issues). The endowment also serves as a key pillar of financial strength and stability.

The Washington University Investment Management Company (WUIMC) board of directors is responsible for overseeing the university's endowment and other financial assets. The WUIMC board developed a broad set of governance principles and processes to ensure the highest professional standards of investment management and oversight — establishing the endowment's strategic asset allocation, risk posture, performance metrics, and ethical values and expectations. These policies, guidelines, and frameworks are delegated to WUIMC's chief investment officer, WUIMC's dedicated investment professionals, and external investment managers that manage the portfolio on a day-to-day basis.

The first and most important objective of the endowment's investment program is to generate the returns required to fund the annual payout, maintain the portfolio's purchasing power (inflation protection), and honor the commitments to donors of endowed gifts and programs. The inter-generational and perpetual lifespan of the university creates a time horizon and mindset that can be a significant competitive advantage. WUIMC carefully constructs a portfolio of external managers, across multiple asset classes and geographies, with this long-term intergenerational

time horizon and performance target in mind. The selection of external managers is based on finding outstanding talent, superior investment abilities, rigorous work ethics, repeatable processes (persistence), intellectual honesty, and the highest ethical standards and integrity.

The second important objective of the endowment's investment program is to invest the university's assets with external managers who pursue investments in companies and strategies that have direct positive impact on the broad constituencies and communities they serve (shareholders, customers, employees, supply chain, and local municipalities, among others). This investment framework and mindset — known as socially responsible investing (SRI), impact investing, or ESG (environmental, social, and governance) investing — encourages investors to focus on businesses with compelling contributions to society at large and avoid businesses with negative impacts.

Although the board's primary focus is on portfolio strategy, performance results, financial stability, risk management, and oversight/governance, it believes it can both achieve strong financial returns and build a portfolio of high quality, socially responsible businesses. Practicing responsible stewardship does not have to come at the expense of higher investment returns. The endowment portfolio has been actively investing for years with venture capital managers who are backing new, emerging businesses that are taking on great challenges and creating new opportunities — ranging from advancing research in cancer and life sciences, expanding health care accessibility and affordability, developing alternative and renewable energy sources, finding solutions to carbon accumulation and the impact on climate, funding affordable housing programs, and generating innovations in sustainable agriculture and food production.



The following principles outline the values that the WUIMC board embraces and the practices and behaviors that it expects from its members, the investment team, and external investment managers.

Be Effective Fiduciaries. WUIMC serves the university's mission by building and managing a perpetual endowment. This requires a thorough understanding of fiduciary responsibilities, the university's mission, and the importance of prudently investing the university's assets. Fiduciary responsibilities include the duty of care (making decisions that are financially, ethically, and legally sound) and loyalty (avoiding conflicts of interests and acting in the best interests of the university).

Be Ethical Stewards. WUIMC follows the highest business ethics standards and expects the same from its external investment managers and the management of companies in which they invest. Ethical considerations must be a part of all due diligence, research, and investment decisions. WUIMC does not seek to profit from the violation of basic human rights and dignity, abusive or oppressive labor practices, gross pollution or environmental destruction, or any form of bribery and corruption.

Be Accountable. Well-articulated governance and decision-making processes foster disciplined portfolio management and transparency. Success must be defined by observable metrics and failures must facilitate reflection and learning.

Make Intelligent and Insightful Risk Decisions. WUIMC believes partnering with specialized external investment managers is the most effective implementation strategy to meet investment and diversification objectives. Investing should strike a balance between adequate diversification and concentrated exposure in high-conviction ideas with vigilant risk management harmonizing both goals. A holistic approach to risk management requires a fundamental understanding of the characteristics and behavior of all underlying investments.

Take a Long-Term View. The university's long-term orientation and perpetual life is the bedrock of a competitive investment advantage and affords greater tolerance for near-term volatility, higher levels of illiquidity, and opportunistic investments. WUIMC is willing to take calculated risks and innovate in the long-term best interests of the university.

Learn Continuously and Adapt to Changing Conditions. A strong investment culture focused on collaboration, exploration, and innovation facilitates a rigorous and repeatable process. It is important to always pursue best practices and stay informed of current trends regarding endowment fund management.

WUIMC shares these guiding principles with the endowment's external managers and asks that they both acknowledge these values and make their best efforts to meet them. The WUIMC board takes its guiding principles seriously and will continue to actively discuss and evaluate its investment approach around these principles.

Endowment Spending (Payout)

An institution's endowment spending policy is a key instrument of financial discipline that allows it to balance the conflicting goals of providing stable support for current operations and preserving purchasing power for future generations.

The annual distribution from the endowment is the university's fourth largest revenue stream, accounting for between 10 and 11 percent of the university's operating budget in a typical year. The largest sources of revenue come from patient care and research grants at the School of Medicine, followed by tuition from all schools of the university, then payout from the endowment.

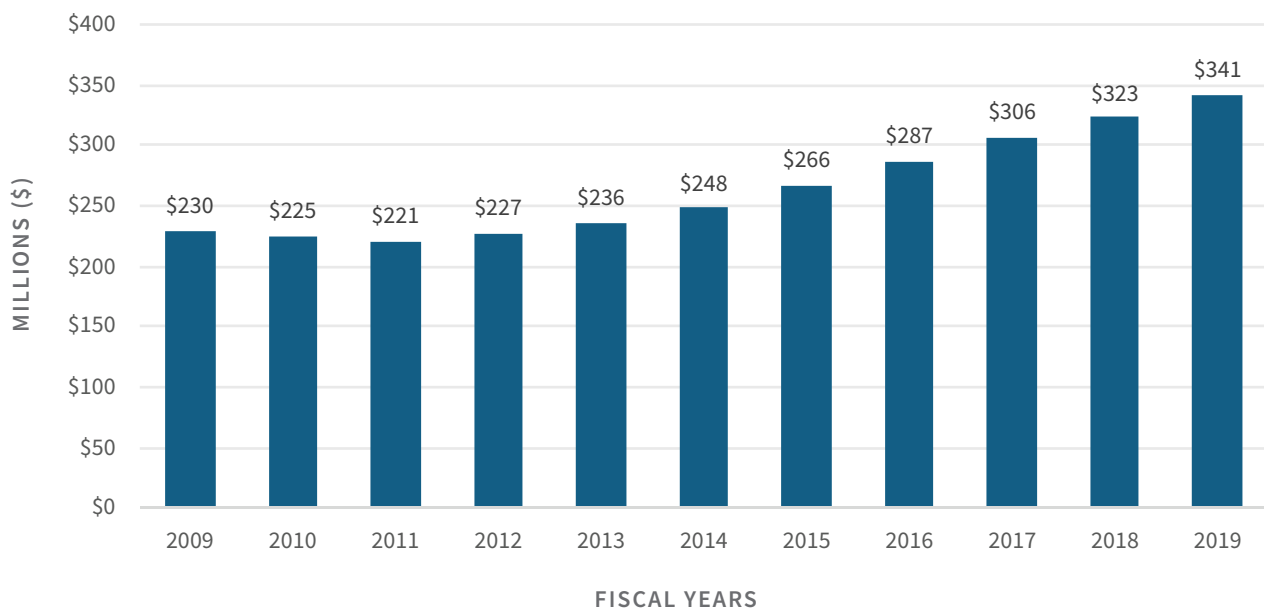
For fiscal year 2019, total endowment spending was \$341 million, of which \$131 million was distributed to the Danforth Campus and \$121 million to the Medical Campus. Additionally, \$89 million funded the work of the university's Central Fiscal Unit and other auxiliary

services. The payout is spent to support schools, departments, research, and programs (49 percent); facilities (20 percent); professorships (17 percent); and scholarships (14 percent).

The fiscal year 2019 payout rate as a percentage of the five-year average market value per unit of the endowment was 4.7 percent, and the payout rate as a percentage of the fiscal year 2019 market value per unit of the endowment was 4.5 percent. Spending from the endowment for fiscal year 2019 represented a 3.5 percent increase over fiscal year 2018.

Spending has risen in nine out of the last 10 years. Endowment payout per unit in fiscal year 2019 was 15 percent higher than it was 10 years ago, while the total dollar payout, including spending on new endowments, has risen 48 percent over the same period.

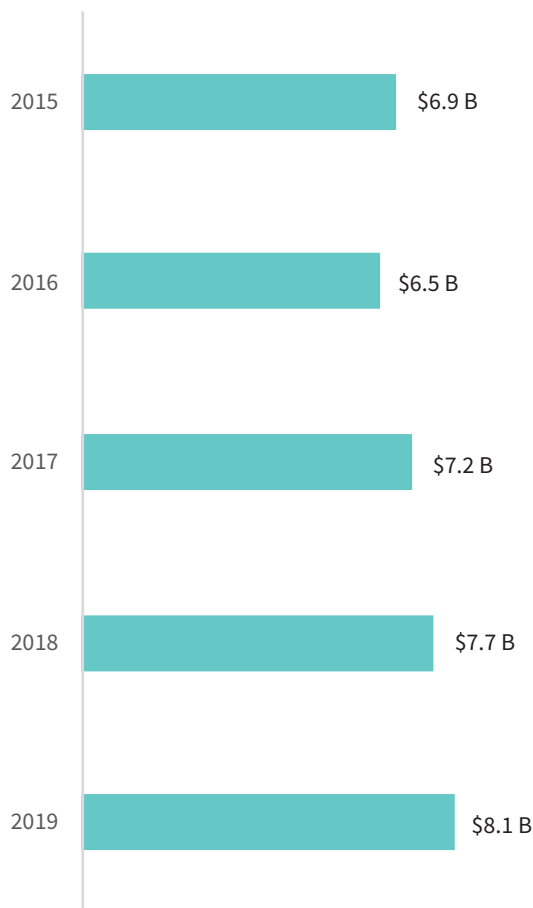
TOTAL ENDOWMENT PAYOUT (\$ MILLIONS)



Investment Strategy and Performance

The endowment was valued at \$8.1 billion as of June 30, 2019, reflecting an increase of \$443 million from the prior year-end value. This included investment gains of \$546 million, endowment gifts of \$121 million, and other net transfers of \$117 million in fiscal year 2019. Spending distributions to the university totaling \$341 million were made in fiscal year 2019.

ENDOWMENT AS OF JUNE 30 (\$ BILLIONS)



Investment Strategy

Washington University Investment Management Company (WUIMC)'s objective is to build and manage a perpetual portfolio to provide for today's generation and preserve and grow the assets so tomorrow's students, faculty, and staff may continue to achieve the university's success in teaching, research, and patient care. In accordance with this objective, investment returns must generate a real return over the long term that maintains the purchasing power of the endowment after inflation, expenses, and payout.

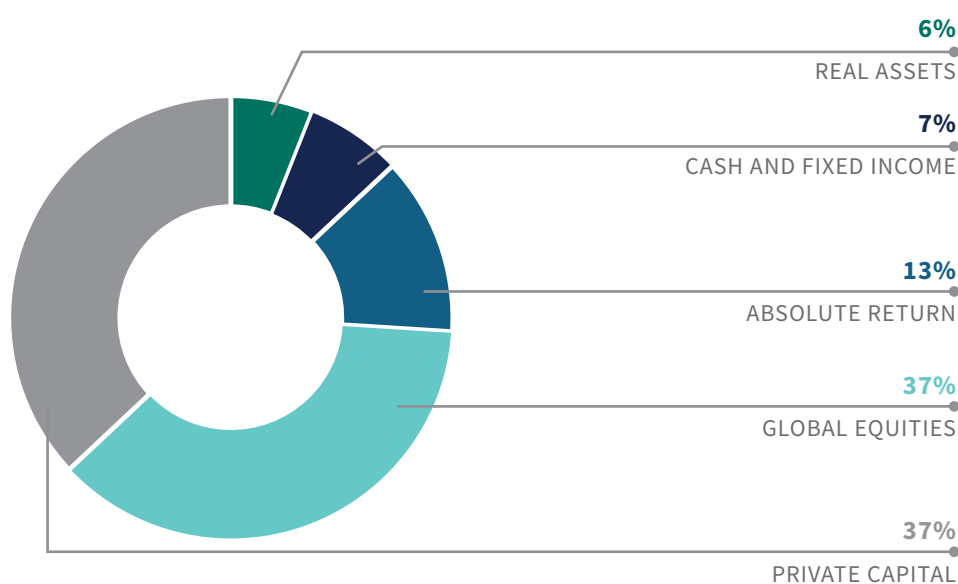
The WUIMC team pursues a strategy of long-term investing, taking advantage of the perpetual nature of this institution. It searches for equity-focused external investment managers with intellectual curiosity and a healthy skepticism of the status quo. WUIMC is increasing the level of concentration in the managed endowment pool (MEP), allowing for exposure to fewer, but more substantial, investment positions in which WUIMC's managers have the highest levels of conviction. This level of concentration tends to increase volatility in the short term, but WUIMC accepts this volatility in exchange for increased long-term investment returns. The WUIMC team is pursuing this strategy on a global basis, across all asset classes, so as to find investment opportunities where capital is less abundant, and valuations are reasonable. WUIMC emphasizes research and diligence review, selecting managers with a rigorous and repeatable investment process. Finally, WUIMC accomplishes this strategy using a collaborative generalist model, assuming that all members of the team could participate in any prospective investment.

Asset Allocation

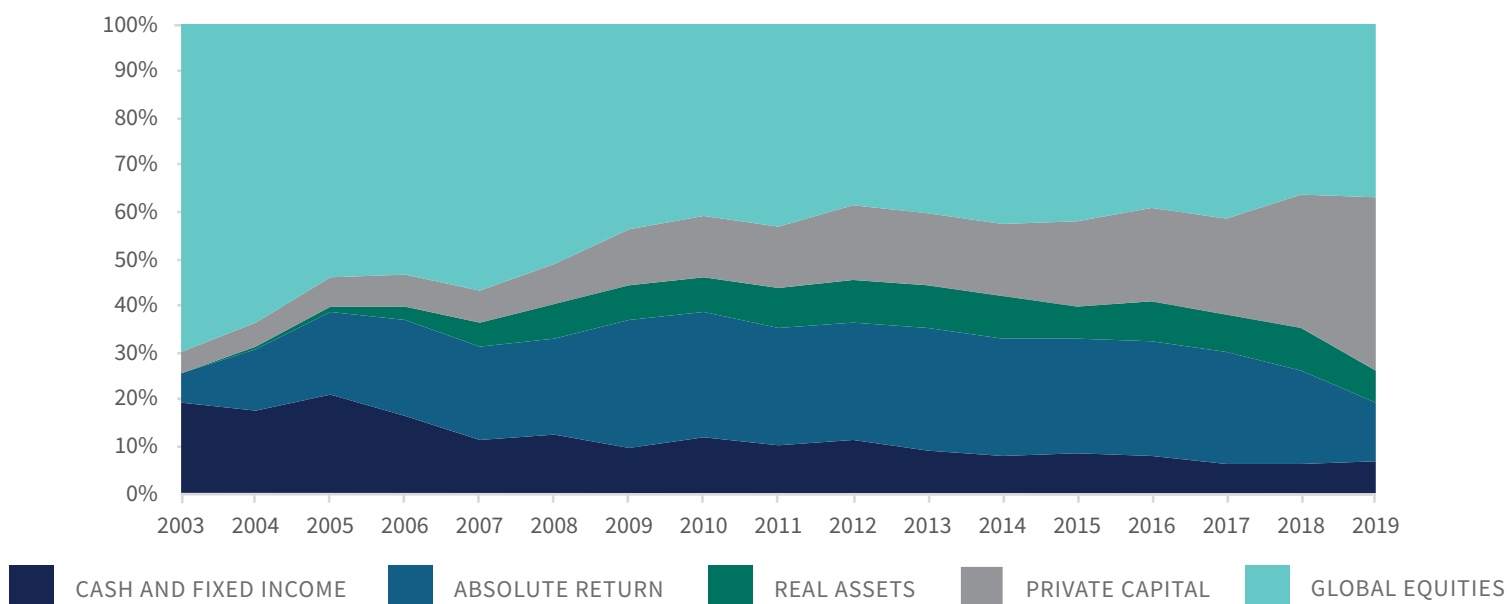
Asset allocation accounts for the majority of investment returns and serves as the foundation of the investment program. WUIMC has adopted a policy of Strategic Asset Allocation (SAA) to provide the highest probability of achieving the university's objectives based on historical returns and established portfolio practices. WUIMC recognizes that equity-oriented assets generally outperform other asset classes over long periods of time, and it has therefore created an equity-focused investment program.

Each year, WUIMC evaluates the SAA to ensure it continues to remain appropriate for the university's risk profile and required returns. Revisions to the SAA are expected to be infrequent and gradual. Over time, the SAA has incorporated more exposure to alternative asset classes, particularly Private Capital, based on the expectation of higher investment returns.

ASSET ALLOCATION AS OF JUNE 30, 2019 (ACTUAL)



ASSET ALLOCATION OVER TIME — FY THROUGH JUNE 30, 2019 (ACTUAL)



Benchmarking Performance

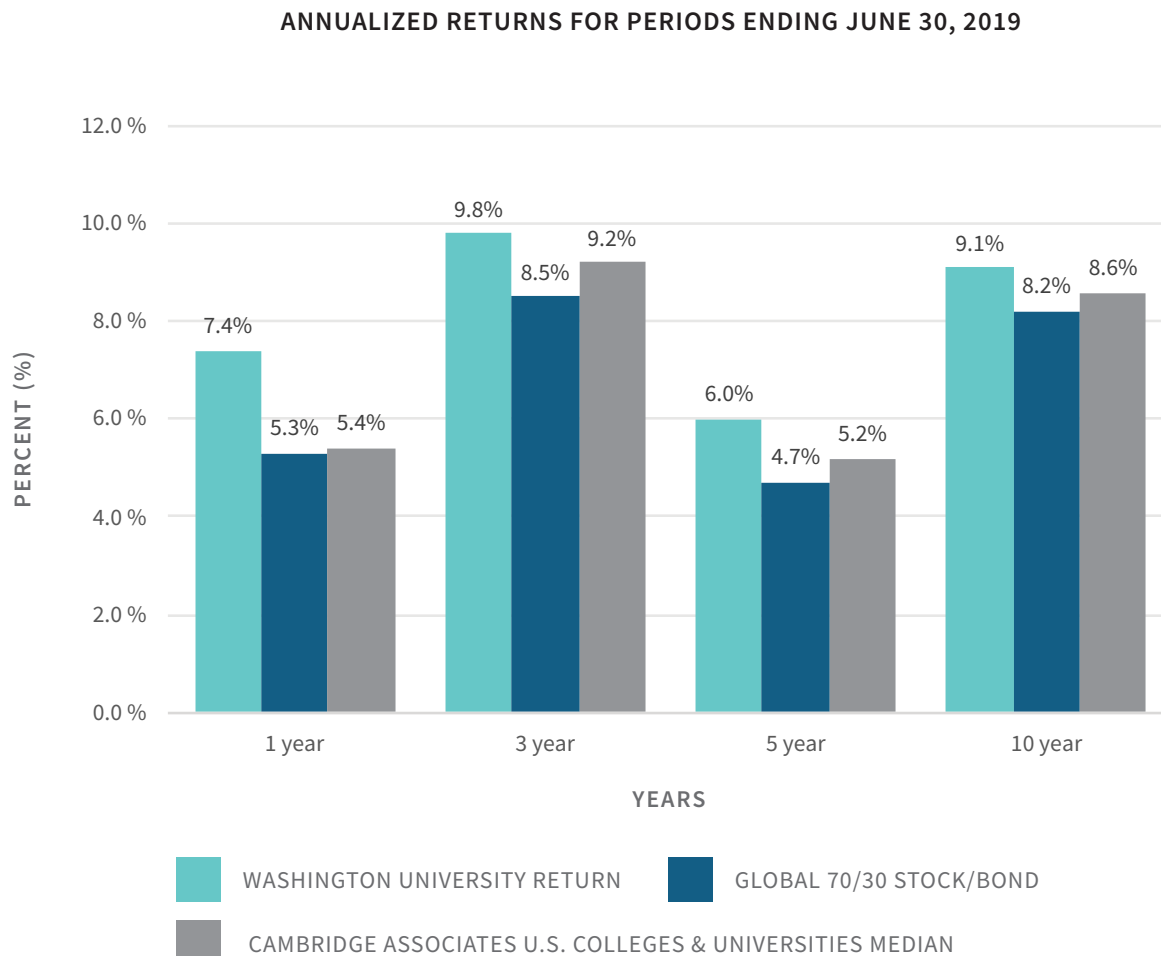
Although the best measure of success for the MEP is whether it can meet its current and future financial responsibilities to the university, portfolio benchmarking also provides standards for performance assessment. Short-term results will vary due to the volatility of capital market returns, but the MEP is expected to meet its objectives over most long-term periods (e.g., 10-year periods). WUIMC's long-term target performance range takes into account the university's financial objectives, consisting of the annual payout, inflation, and real growth.

The MEP is expected to exceed a blended benchmark composed of 70 percent global equities and 30 percent global bonds. This passive benchmark is then compared to the investment performance of the MEP, which enables an evaluation of WUIMC's active investment strategy.

Recognizing that the university seeks outstanding students, faculty, and staff, the WUIMC board will also evaluate the MEP in relation to other U.S. universities and colleges.

Fiscal Year 2019 Investment Performance

The MEP returned 7.4 percent in fiscal year 2019, outperforming a global 70/30 stock/bond index by more than 200 basis points. This performance was primarily driven by the Private Capital allocation, which returned 16.2 percent for the fiscal year. Global Equities generated a 5.8 percent return while Fixed Income returned 4.1 percent. Absolute Return and Real Assets allocations detracted moderately from performance.





Investing in Positive Impact

To secure a strong financial foundation for Washington University, Washington University Investment Management Company (WUIMC) seeks to generate the highest investment returns over the long term within established risk boundaries. WUIMC believes that the long-term pursuit of financial returns is inherently biased toward investments that have highly positive impact. Therefore, companies whose core goods and services address major global social and environmental issues — such as climate change, food insecurity, lack of access to health care, resource degradation — have the potential to generate significant returns over the coming decades. With that in mind, WUIMC seeks to partner with skilled investment managers that identify and source access to businesses and companies pursuing solutions to complex issues and that are able to capitalize on disruptive investment opportunities.

This is a first effort to highlight the complexion and tone of investments within the endowment portfolio. However, it is an industry-wide challenge to evaluate the positive impact of just a single company; it is an even bigger challenge to report on an entire portfolio. WUIMC partners with over 100 external managers who invest in more than 3,000 individual holdings globally. This presents several complexities: there are no impact reporting standards that apply uniformly across the portfolio (different metrics apply with differing magnitudes from company to company); almost 40 percent of the portfolio is invested in private companies that do not have regulated reporting requirements; and reporting regulations for public companies are in the early stages of standardizing SRI/ESG reporting metrics. Accepting these challenges, this annual report represents an initial but important attempt to shed light on the amount of positive impact within the endowment's investment portfolio.

WUIMC is pleased to report that the Washington University portfolio has a substantial level of investment in companies seeking solutions to large and complex societal problems. Approximately 23 percent of the endowment (roughly one out of every five endowment dollars) is currently invested by WUIMC's external managers in positive impact companies. Over 14 percent of the endowment (more than \$1 billion dollars) is currently invested in companies providing access to health care, education, and financial services for the underserved, and in companies pursuing advancements in life sciences and disease research. Investments in clean tech and renewable energy continue to grow as these businesses gain traction in the marketplace. Notably, the endowment has virtually no investments in coal; this is a striking example of market forces at work as coal becomes a decreasing segment of global energy markets.

It is important to note that many positive impact companies are venture-capital-backed startups where the initial investment dollars are small, but the potential disruption, impact, and investment returns are significant. While some of the exposures are relatively small — clean tech and renewable energy, for example — the potential impact and solutions are substantial if successful.

Given the varying degree of company-specific transparency across the portfolio, WUIMC has developed its own framework for reporting on the portfolio's positive impact. The framework is informed by an extensive review of third-party market data and relies to a substantial extent on the reporting of WUIMC's external investment managers. The goal is to keep up to date on best practices and continue to improve reporting on the positive impact in the endowment portfolio.

POSITIVE IMPACT AREAS	DESCRIPTION	EST. % AT 6/30/19	\$ VALUE INVESTED
FINANCIAL INCLUSION	Accessibility to affordable and secure financial products and services	6%	\$524 M
HEALTH CARE	Access, affordability, and innovations in life sciences and disease research	5%	\$489 M
EDUCATION & EMPLOYMENT	Provisions of early childhood education, vocational training, and human resource development	3%	\$292 M
TECHNOLOGY	Access to technology; advancements in manufacturing, semi-conductors, and communications	3%	\$249 M
HOUSING	Investments in affordable housing, construction, and fair-lending programs	2%	\$153 M
FOOD TECH & SUSTAINABLE AGRICULTURE	Expansion of global food supply and sustainable agricultural practices	2%	\$144 M
PRODUCT & LABOR SAFETY	Development of workplace and consumer product safety, mobility devices, and data security/privacy	1%	\$85 M
CLEAN TECH & RENEWABLE ENERGY	Enhancement of solar, hydro and wind power, grid engineering, water management, and zero-emission transportation	1%	\$80 M
TOTAL POSITIVE IMPACT		23%	\$2,016 M

Two of the endowment's indirect portfolio holdings that demonstrate commitment and vision to positive impact are:



MODERNA, INC. (HEALTH CARE ADVANCEMENTS)

Moderna's goal is to develop treatments for a wide range of diseases and conditions, including infectious diseases, rare genetic diseases, cardiovascular diseases, and cancer. The company was founded in 2010 as a drug discovery and development company that creates messenger RNA (mRNA) sequences for potential use as medicines in patients. Cells use mRNA to help the body produce and create its own therapeutic proteins. If successful, Moderna's platform could have broad and disruptive potential across the biopharma landscape.



SCATEC SOLAR (CLEAN TECHNOLOGY)

Scatec Solar delivers affordable, rapidly deployable, and sustainable clean energy worldwide. The company — founded in 2007 as an independent solar power producer — develops, builds, owns, and operates solar power plants and has a total of 1.9 gigawatts in operation and under construction on four continents. It has a goal of reaching 4.5 gigawatts in operation and under construction by year-end 2021. Scatec's operating solar plants avoided about 650,000 tons of greenhouse gas emissions in 2018, underlining the positive climate impact of the company.

The Endowment at Work: Deanships and Professorships

For a university to be counted among the world's very best, it must have inspiring and accomplished deans and faculty. These deans and faculty draw talented students who, in turn, inspire their professors and leaders to even higher levels of excellence. It is an impactful and self-generating cycle that makes the university community thrive and continuously evolve.

Endowed deanships and professorships allow Washington University to attract, retain, and honor some of the most distinguished academic leaders and faculty members in the world. These expert scholars educate students, engage deeply across disciplines, and conduct research that continues to bring distinction to the university.

They are today's pioneers, but they follow in the footsteps of a long succession of distinguished faculty who have called Washington University home. From numerous scientific Nobel laureates like physicist Arthur Holly Compton and biochemists Carl and Gerty Cori to the mid-20th century's "dean of American surgery" Evarts A. Graham, Pulitzer Prize-winning poet Howard Nemerov, and Nobel Prize-winning economist Douglass North, faculty at Washington University know they stand in storied company.

Endowed deanships and professorships are the highest honor academic leaders and faculty members can receive and are reserved for driven, visionary, and eminent individuals whose professional paths make lasting marks

on the world. Washington University has set the bar high throughout its history, and it is more committed than ever to establishing endowed positions. The perpetuity of the endowment supports ongoing and ever-evolving generations of scholars who build on the knowledge of the past and pay it forward to the future. That's the power of Washington University's dedication to centuries of learning, scholarship, innovation, and discovery.

Endowed deanships and professorships recognize both a donor or honoree as well as the person who holds the position. Washington University would not be where it is today without the visionary financial support of its founders and earliest supporters who understood the importance of building an endowment to support the world's leading scholars. Since the first professorship was established to honor university co-founder William Greenleaf Eliot in 1856, nearly 500 additional endowed positions have been created.

Great faculty are at the heart of the university, and supporting their work is essential. Because of endowed positions, the university's very best minds are able to move forward with impactful ideas and research topics as they advance another great mission of the university — teaching the next generation of thinkers and doers to chart their own courses of innovation, compassion, creativity, and purpose.



Working for Leadership in Design and Visual Art

Emeritus Trustee Ralph J. Nagel, BArch '67, MArch '69, and his wife, Trish M. Nagel, JD '74, wanted to further the Sam Fox School of Design & Visual Arts' mission of preparing future artists, architects, and designers to take creative risks and address social and environmental challenges through their work. They decided the best way to do that was to invest in the leadership of the school, establishing the Ralph J. Nagel Deanship.

Carmon Colangelo is the inaugural Ralph J. Nagel Dean of the Sam Fox School of Design & Visual Arts and the school's founding dean. He also holds the E. Desmond Lee Professorship for Collaboration in the Arts. In 2006, he brought together the former School of Art and School of Architecture with the Mildred Lane Kemper Art Museum, creating a diverse community of artists, architects, designers, and scholars unified around a shared vision of creative activity, practice, and research. Under Colangelo's leadership, enrollment in the architecture and art graduate programs has doubled, and the school's undergraduate programs are attracting some of the nation's most talented students. He has used Nagel Deanship funds to strengthen the school's commitment to faculty and student research, innovation, and collaboration. Recent initiatives include research dissemination grants that provide faculty with opportunities to present their work at national and international conferences, and Fox Fridays, a series of free workshops open to all students that expand their design toolkit and encourage connections across academic programs.

Working for Emotional Intelligence in the Workplace

As longtime models of business excellence and engaged members of the Washington University and St. Louis communities, Emeritus Trustee John K. Wallace Jr., MBA '62, and his wife, Ellen A. Wallace, have made many significant contributions to Olin Business School, including substantial support for scholarships. In 1997, they established a distinguished professorship at Olin to recognize and support a renowned faculty member who is impacting the lives of students and the larger world of business.

The current holder of the John K. and Ellen A. Wallace Distinguished Professorship, Hillary Anger Elfenbein, is a professor of organizational behavior whose research focuses on understanding emotions in the workplace. She studies the emotional currents of the nuances found in facial expressions, tones of voice, and body language. She is often called upon to help executives manage their own emotions and fears, helping them to understand emotions as "alarm systems," not weaknesses. "All emotions have their place," she says. "They are often out of place, but they have their place."

She has shared her findings with Congress, high-powered executives, and, of course, her Olin students. She joined the Olin faculty in 2008 and works with the school's MBA students. Recently, she led an international, cross-cultural research team that studied judging emotions from vocal expressions uttered by people in the United States, Australia, India, Kenya, and Singapore.





Working for Solutions to Viral Infections

The Herbert S. Gasser Professorship in Medicine demonstrates the lasting impact of an endowment created to honor a person's life and work. This professorship is one of four endowed by Emeritus Trustee John F. McDonnell, DSc '06, MBA '14, and the JSM Charitable Trust in 2003 to support the university's BioMed 21 initiative. The professorship honors Herbert Gasser, former head of the pharmacology department at the School of Medicine, who won the Nobel Prize in physiology or medicine in 1944 for his research on single nerve fibers, pain, and reflex. Gasser himself was a philanthropic visionary, and he donated his Nobel Prize money to further his research.

The current holder of the Gasser Professorship, Michael S. Diamond, MD, PhD, is recognized internationally for his research involving emerging viral infections. A professor of medicine, of molecular microbiology, and of pathology and immunology, he uses his cross-disciplinary expertise to study mosquito-borne viruses such as West Nile, Zika, dengue, and chikungunya. He seeks to understand how these viruses cause illness and interact with and evade the immune system. For his contributions to his field, he was recently named the 2019 recipient of the American Society for Clinical Investigation's Stanley J. Korsmeyer Award and was elected to the National Academy of Medicine in 2018.

Working for an Answer to Alzheimer's Disease

Andrew B. Jones, MD, joined the faculty of the School of Medicine in 1922, establishing himself as an expert on contemporary health issues such as rabies and encephalitis. Late in his life in 1980, he and his wife, Gretchen P. Jones, established a professorship now held by David M. Holtzman, MD, a leading expert on one of today's most pressing health issues — Alzheimer's disease.

Holtzman has held the Andrew B. and Gretchen P. Jones Professorship in Neurology since 2003, when he was named head of the Department of Neurology. At the School of Medicine, he also serves as the scientific director of the Hope Center for Neurological Disorders and associate director of the Charles F. and Joanne Knight Alzheimer's Disease Research Center.

In the course of his career, Holtzman has traced the twisted roots of Alzheimer's disease, hoping to identify treatments to slow or stop the disorder. His research investigates topics including why certain proteins such as amyloid and tau accumulate in the brain in Alzheimer's disease and ways to prevent this. He has also explored how poor sleep is involved in the buildup of amyloid and tau. His lab is internationally recognized for its efforts to identify biomarkers that can be used to detect the presence of Alzheimer's disease many years before patients begin to show outward symptoms. Holtzman has also trained over 50 graduate students, post-doctoral fellows, and physician-scientists, many of whom have gone on to successful careers in academia and industry.

The Endowment at Work: Scholarships and Fellowships

Today, talented and hardworking undergraduate, graduate, and professional students around the world compete to attend Washington University. From among thousands, they are selected based on their academic achievement and the promise they show to become leaders and change-makers. But many cannot achieve that goal on their own, and the opportunity of a Washington University education can seem out of reach.

Washington University is deeply committed to helping these young people reach their full potential, regardless of their financial means. During his inaugural address, Chancellor Martin announced the WashU Pledge, a bold new financial aid program that will provide free undergraduate education, as well as room, board, and fees, to incoming, full-time Missouri and southern Illinois students who are Pell Grant-eligible or whose families

have annual incomes of \$75,000 or less. The WashU Pledge reflects the university's commitment to advancing efforts to broaden educational access; improve diversity, equity, and inclusion; and strengthen the university's partnerships in St. Louis and across the region.

The university believes that all qualified students should have access to a Washington University education, and endowed scholarship funds are essential to making this a reality for students with financial need. *Leading Together: The Campaign for Washington University*, which ended June 30, 2018, raised \$591 million for scholarships and fellowships, including funding for 690 new endowed scholarships and fellowships, allowing the university to attract and support a talented and diverse student body for future leadership and service to society. Endowed scholarships and fellowships provide life-changing support not only for current students but for many generations to come.



Working for Students Like Them

Speaking on behalf of a large group of scholarship donors at the 2017 Arts & Sciences Scholarship Dinner, Andrea “Andy” Nocchiero, AB ’74, recalled having “the talk” with her father after telling him that she had her heart set on attending Washington University. Unfortunately, her family could only afford one year of tuition. She was heartbroken until a letter arrived, informing her that she was a recipient of the George E. Mylonas Scholarship, covering her full tuition and book fees.

At Washington University, Andy met her future husband, Anthony “Tony” Nocchiero, BS ’73, who was also able to attend the university because of a full scholarship from a generous corporate sponsor. They were thrilled to find fabulous teachers and a community of serious students also committed to service, and their lives were changed forever. Years later, they established endowed and annual scholarships in Arts & Sciences and the McKelvey School of Engineering to support students with financial need similar to their college-aged selves.

“The university is stronger when students come from myriad backgrounds and means,” Andy said at the 2017 dinner, noting that she and Tony learned that to establish a scholarship they didn’t need the financial means of captains of industry or Hollywood stars. “By adding our efforts to the efforts of many, we can achieve amazing things.”

Working for a Place in Medicine

When Mary Langston Parker, MD ’53, graduated from college in 1946, she was encouraged by a professor to apply to Washington University for medical school, despite being told at another medical school that she would not be accepted because “accepting a woman who would not use her degree would deny a man a place.”

She enrolled at Washington University School of Medicine, received the Jackson Johnson Scholarship, and earned her medical degree as one of only four women in the graduating class. Following a sojourn in Saipan where her husband was an internist for the U.S. Navy, she returned to the School of Medicine in the early 1960s, eventually becoming an assistant professor, staff physician, and director of Student Health Services. She retired as professor emerita of preventive medicine in 1990.

Mary Langston Parker’s family has a rich history with Washington University. Her husband, Charles W. Parker, MD ’53, was a pioneer in the treatment of allergies and asthma, four of their children graduated from the School of Medicine, and another daughter graduated from Arts & Sciences. The Mary Langston Parker Scholarship in the School of Medicine was established by her children after her death in 2014, and many other family members and friends have contributed to the scholarship to continue her legacy.

The Endowment at Work: Research

Each year, scientists and scholars at Washington University are involved in breakthroughs that garner headlines and grab the attention of the world. Indeed, for generations, university faculty have made groundbreaking discoveries, many leading to new engineering and business innovations, medical treatments and surgery techniques, and patient care strategies. Other discoveries help us see, interpret, and work in the world in new and more effective ways. But like most good things, these innovations do not happen quickly, cheaply, or through the genius of one person. The image of one lone scholar or researcher having a light-bulb moment of discovery is a romantic notion. The reality is that all important progress is made by building on the work of those who come before us.

The work of discovery happens slowly and resolutely over succeeding generations of talented researchers, each doing their part to move the ball forward. In addition to having a creative and visionary faculty, universities must also provide the intellectual and physical infrastructure that allows for researchers to follow a line of inquiry from the past to far in the future, making changes and alterations to their approach as knowledge and technology evolve. To discover both ancient and emerging truths, students and faculty require the tools of their trades: up-to-date libraries, cutting-edge technology, and state-of-the-art facilities.

Endowed funds for research and for the creation, growth, and maintenance of specialized centers, clinics, studios, and institutes are crucial to the university's capacity to solve the world's toughest problems and create a better, healthier world.





Working for Precision Health Care Policy

The rise of precision medicine, which provides tailored treatments based on patients' genetic characteristics and environmental and lifestyle factors, has ushered in a health care revolution with tremendous potential to improve lives. But it also has introduced unprecedented questions and challenges regarding privacy, information security, and intellectual property. For example, if a physician develops a genetic profile to help treat a patient, who should have access to and own that information?

Recognizing the need for policies to address these questions, alumni Joseph Cordell, LLM '08, and Yvonne Cordell, JD '88, made a \$5 million commitment to establish the Joseph and Yvonne Cordell Institute for Policy in Medicine & Law. Launched in 2018, the institute facilitates collaboration between the School of Medicine and the School of Law to promote the ethically responsible development of data-driven health care.

"There are numerous issues arising from precision medicine, genomics, and DNA mining, and no one knows what all the legal repercussions will be," Yvonne Cordell said. "It's important for the disciplines of medicine and law to come together so they can inform one another."

Working for Faster Psychiatric Drug Development

The World Health Organization estimates that psychiatric disorders such as depression, bipolar disorder, post-traumatic stress disorder, and schizophrenia affect more than 80 million Americans and roughly 25 percent of people around the world. But despite how common the disorders are, few drugs provide effective treatments.

Distinguished Trustee Andrew Taylor and his wife, Barbara Taylor, know the devastating effects of mental illness from family experience, and they wanted to accelerate the speed at which new drugs and treatments could be developed. In 2012, they established the Taylor Family Institute for Innovative Psychiatric Research. The institute's focus on developing new therapies for psychiatric disorders is rooted in a stark reality — many existing medications demonstrate limited effectiveness, come with wide-ranging side effects, and aren't designed to target the fundamental mechanisms in the brain that underlie illness.

In just seven years, scientists at the institute have developed sophisticated tools to study how particular brain chemicals alter brain function and play a role in regulating cognition, emotion, and motivation. That work has been important in identifying new drugs that target brain cell receptors affected by these chemicals.

In 2018, seeing the great progress that had been made, the Taylors, in partnership with the Crawford Taylor Foundation, committed an additional \$10 million to continue the institute's work.



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