

Washington University Investment Management Company



ANNUAL REPORT

2020–2021

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Endowment At-A-Glance

65.1%

FY21 MEP*
RETURN

\$15.3 B

MEP MARKET VALUE
AT 6/30/21

\$13.7 B

ENDOWMENT MARKET
VALUE AT 6/30/21

\$78.7 M

NEW ENDOWED GIFTS
IN FY21

12.2%

10-YEAR ANNUALIZED
MEP RETURN

3,785

TOTAL NUMBER OF
ENDOWED FUNDS

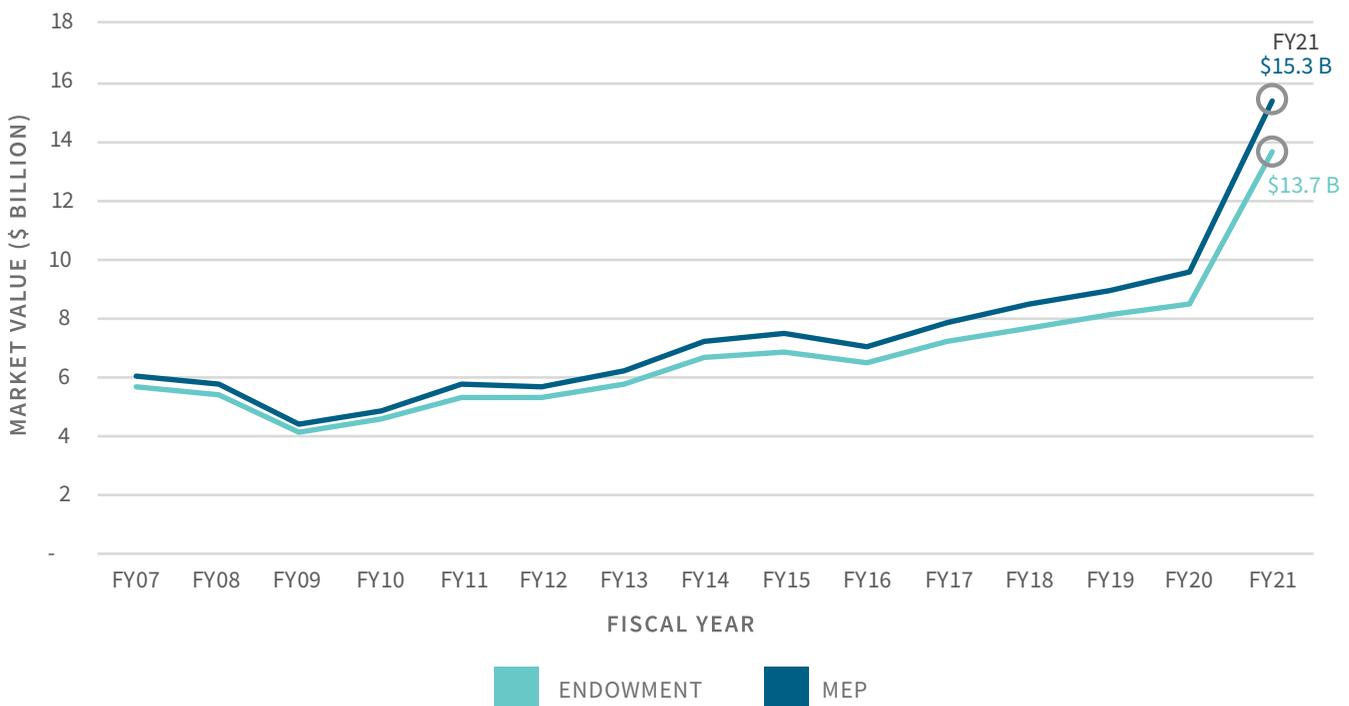
65%

ENDOWED FUNDS WITH
DONOR RESTRICTIONS

\$366 M

ENDOWMENT PAYOUT
IN FY21

HISTORICAL MARKET VALUE

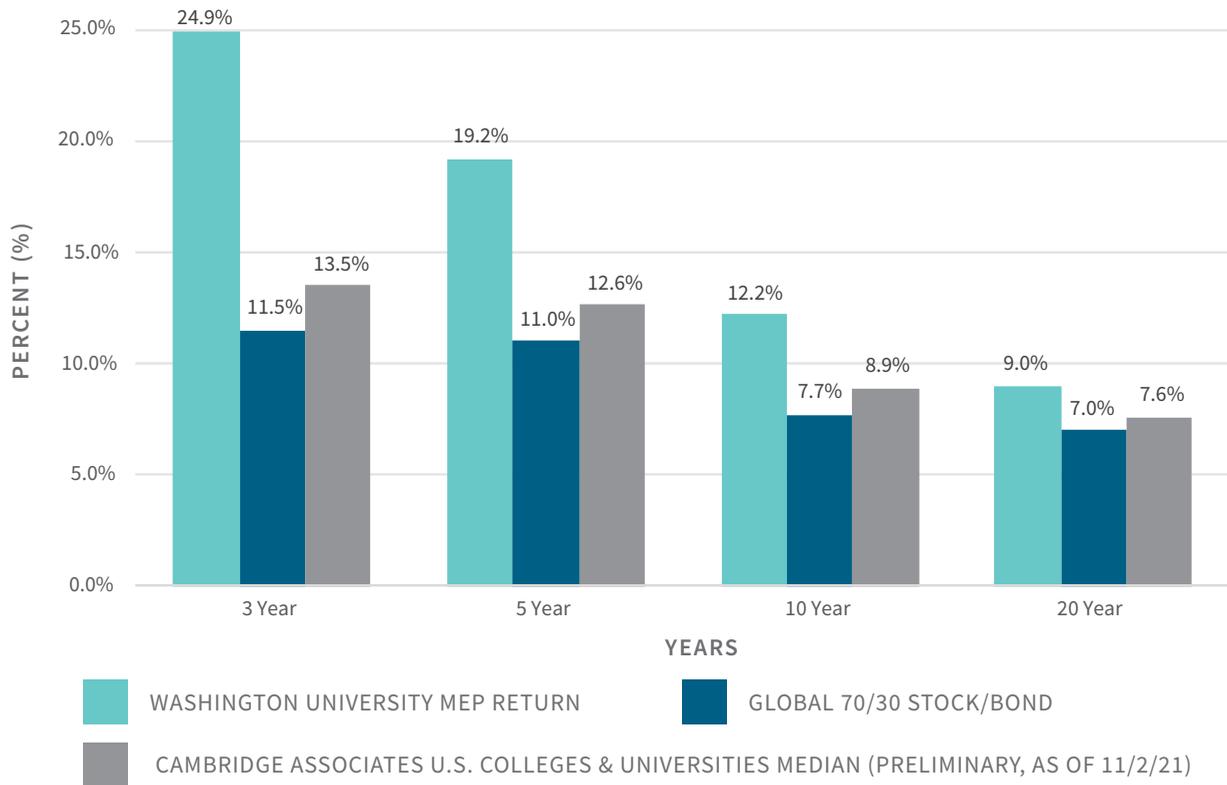


*Managed Endowment Pool (MEP): A pool of capital managed by Washington University Investment Management Company (WUIMC) that includes the vast majority of the endowment plus additional long-term operating assets of the university.

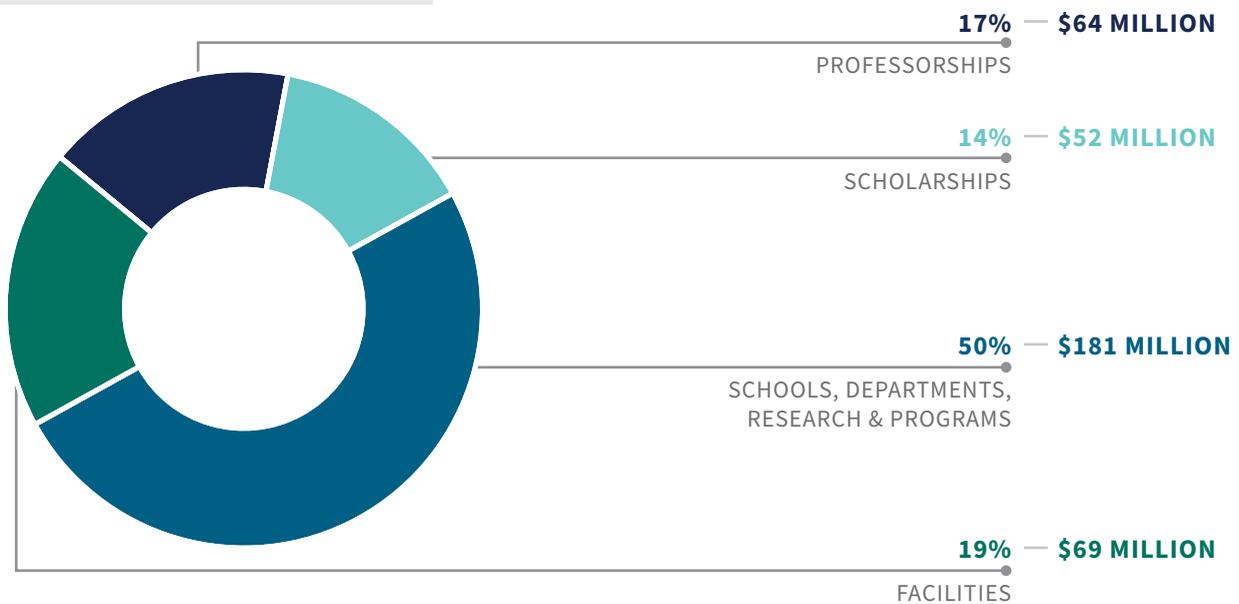
MULTIYEAR PERIODS

	FY17	FY18	FY19	FY20	FY21
ENDOWMENT MARKET VALUE (\$ MILLION)	\$7,215	\$7,687	\$8,130	\$8,515	\$13,665
MEP MARKET VALUE (\$ MILLION)	\$7,861	\$8,465	\$8,915	\$9,583	\$15,346
MEP ANNUAL RETURN (% PERCENT)	11.3%	10.9%	7.4%	9.9%	65.1%
ANNUAL SPENDING PAYOUT (\$ MILLION)	\$306	\$323	\$341	\$362	\$366

ANNUALIZED RETURNS



FY21 ENDOWMENT DISTRIBUTION BY USE



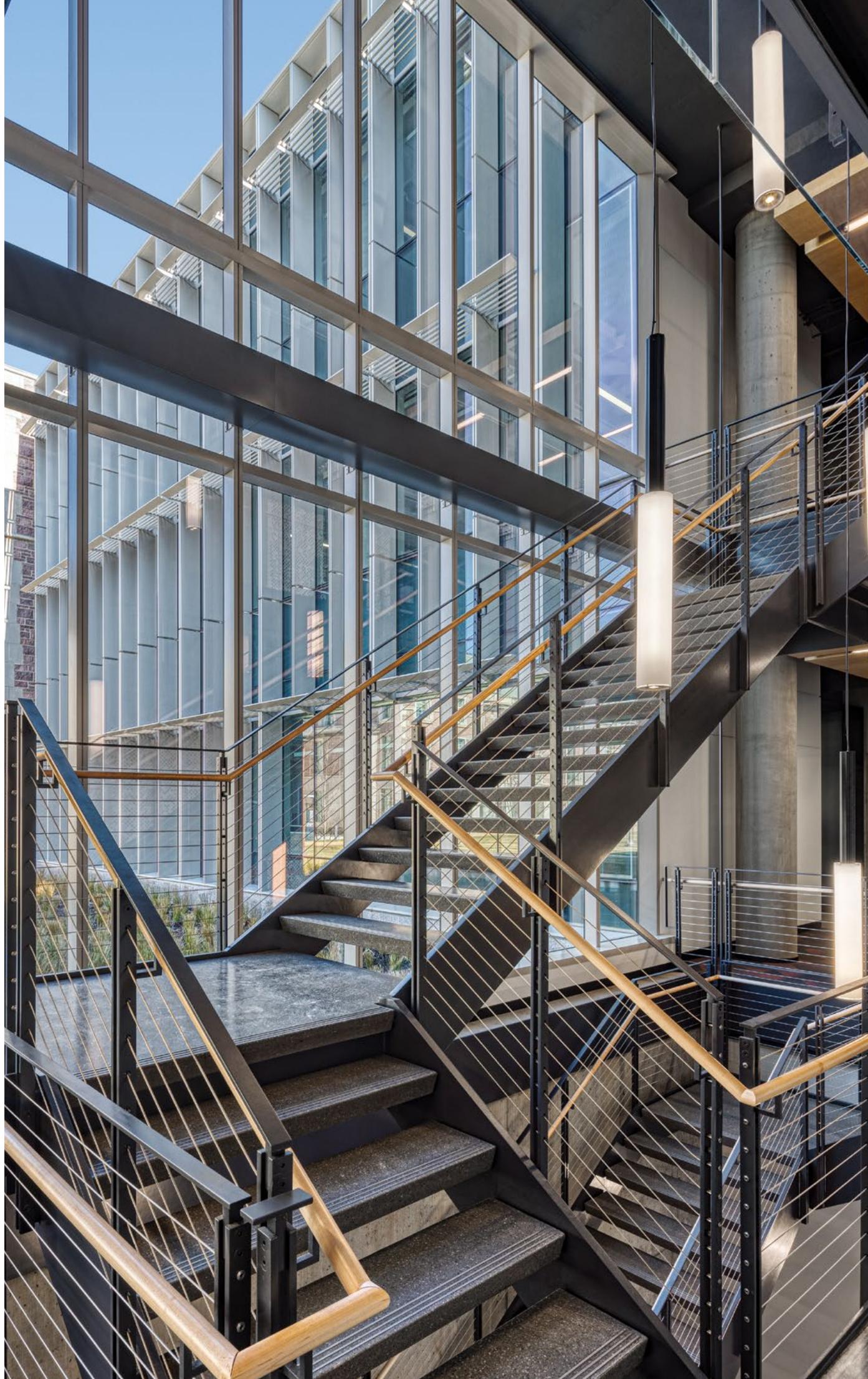


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Message from the Chancellor

Recently, news of our endowment has been a topic of great interest in our community and beyond. As you read this year's annual report, you'll quickly see why we've generated a lot of buzz. I am grateful for the vision and excellence exhibited by Chief Investment Officer Scott Wilson, WUIMC Executive Board Chair Eric Upin, and our entire investment team that led us to a trajectory-altering performance. They are the best in their field, certainly, but more than that, they are driven by the "why" behind the work; that is, our mission to impact lives in service of the greater good.

In the pages that follow, you'll learn about the exciting ways we have used our endowment to advance Washington University's teaching, research, and patient care missions during this most extraordinary year. From groundbreaking scientific and therapeutic advances to reducing environmental injustice to supporting student mental health through their pivotal years on campus, the endowment is working each day to solve problems great and small, globally and locally.

Because of last year's once-in-a-lifetime endowment return, we're able to put our foundational values to work to make a greater impact than ever before. Most notably, we were able to make good on our promise to make a Washington University education accessible and affordable to all qualifying students regardless of their financial situations through Gateway to Success, a historic \$1 billion investment in student financial aid for undergraduate, graduate, and professional students and the fulfillment of my pledge to implement a need-blind undergraduate admissions model in which an applicant's ability to pay will never be a factor.



“The truth is, no matter how much the endowment grows, we’ll never rest on our laurels, because the work of the university never ends.”

Now that we've reached this exciting milestone, we're eager to do even more. First and foremost, we are ready to invest more heavily in programs that support the whole student. From meeting basic daily needs to offering personalized career mentorship and everything in between, our dream is for WashU to be the best school in the country for comprehensive student support. The need is great, but the commitment of our board, our leadership, our faculty and staff, and our alumni and friends is greater.

The truth is, no matter how much the endowment grows, we'll never rest on our laurels, because the work of the university never ends. As long as humanity continues to be threatened by complex problems like disease, inequity, and climate change — and whatever challenges we have yet to imagine — there is work to do.

At each turn, this community has risen to meet the moment. It is my great privilege to witness your generosity and brilliance at work each day in service of others and to steward this institution as we work together toward a brighter future.

Andrew D. Martin
Chancellor

Message from the Chief Investment Officer

Fiscal 2021 was a strong year across capital markets, and we are happy with the performance of WashU's investment portfolio. The team and I are incredibly grateful to the WUIMC Board and the WashU administration for their support, which allowed us to take advantage of various investment opportunities that generated significant returns as the world adjusted to a new normal. We must also thank our investment partners, who share our values and continue to pursue their best ideas in support of the university's mission. Following a year of strong investment returns, our hope is that the focus remains on the academic and research programs and initiatives that these additional dollars can support. Given the perpetual nature of our institution, we are also continually mindful of the importance of building a portfolio that will generate strong returns beyond the one-year time frame for the benefit of the university.

As we reflect on the progress of the last year, we need to acknowledge that much of the growth in capital markets and in our own portfolio resulted from increasing valuations and market multiples. This acknowledgement is followed by an understanding that the outlook for future investment returns may be less favorable. As a result, our team will pursue the same strategy that we have employed since 2017 when we began transitioning the portfolio. We'll continue to narrow the portfolio to include only those holdings in which the WUIMC team maintains the highest levels of confidence alongside investment partners who are willing to concentrate significant amounts of capital behind their best ideas. We understand that this level of concentration will likely create a short-term increase in volatility, but we are willing to accept this volatility in exchange for solid returns over sustained periods of time. The university's perpetual existence also supports longer holding periods, which we hope will ultimately



“We must also thank our investment partners, who share our values and continue to pursue their best ideas in support of the university's mission.”

translate into a cycle of capital compounding and growth in university assets. In order to accomplish the day-to-day work of these objectives, we'll draw on the talents, thoughts, and experiences of a diverse group of individuals, both on the WUIMC team and within our cohort of talented investment partners.

While we have been energized by the performance results of the last few years, we also look forward to returning to the regular work of traveling, meeting with investment partners and individual companies, and building an augmented framework for understanding the competitive landscape of investments that may materialize in the future. We view this groundwork as essential preparation for a time when market disruptions may provide an opportunity to acquire positions at attractive valuations in these previously researched areas. More importantly, these measures will enable our team to continue to support the mission of the university. We're thrilled to contribute to the Gateway to Success Fund and to be a part of WashU's new policy of need-blind admissions, and we look forward to supporting the work of this special institution for generations to come.

Scott L. Wilson
Chief Investment Officer

Message from the WUIMC Board of Directors

Eric B. Upin, WUIMC Executive Board Chair

Under the steadfast leadership of CIO Scott Wilson and Deputy CIO Andrew Choquette, the Washington University endowment team achieved simply extraordinary, exceptional, and transformative performance results in fiscal year 2021. The endowment generated a 65.1% return for the year, a three-year average annual return of 24.9%, and a five-year average annual return of 19.2% — all placing within the top 10% of returns generated by top endowment peers and materially exceeding both the 70/30 stock/bond index and the S&P 500 index. It is a remarkable achievement that will have a lasting and positive impact on the university for generations.

FY2021 returns were generated across the entire portfolio of asset classes and investment managers — resulting from the repositioning and rebuilding of the investment portfolio and endowment organization by CIO Scott Wilson and his team over the past 3½ years. This represents the third consecutive year of top quartile results (on a year-by-year basis).

University endowment portfolios are long-term, intergenerational pools of capital — where time horizon and the overall structure are a competitive advantage. This advantage, combined with outstanding investment talent, can produce higher performance results over the long term, if well managed and implemented. Additionally, the ramifications of compounding excess returns over 10–25 years (a relatively short period in the lifespan of a university) are truly profound — resulting in substantially larger portfolios to fund university initiatives and aspirations.

University endowments and endowed gifts play an essential and vital role — supporting educational scholarships (affordability, access, and inclusion); endowed professorships (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.

Additionally, it is gratifying to see these efforts culminate in Gateway to Success, announced by Chancellor Andrew D. Martin in October 2021. Gateway to Success is a bold vision and enormous commitment of \$800 million in endowed funding to support need-blind undergraduate admissions and \$200 million in endowed funding for graduate-level financial aid. Need-blind admissions and financial support to students and families, for this generation and beyond, will have significant and long-lasting positive impacts.

We believe the endowment portfolio and investment organization are well positioned to continue to perform and do so in a manner that is aligned with the mission of the university. For example, over 30% percent of the total portfolio is invested in direct positive-impact investments, while being substantially underweight to carbon emission and non-renewable energy sectors (with near-zero exposure to coal businesses). We do not foresee material changes in this posture at this time.

We remain resolutely focused on ensuring that the endowment continues to provide the university, generous donors, and talented recipients with consistent funding (annual payout), purchasing power (inflation) protection, long-term growth, and strong performance.

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

Kelli P. Washington



Universities as Forces for Good

Universities, by their very design and definition, impact the world around them. By educating students, they endow the future with generations of inquisitive and prepared individuals who will continue to innovate and lead with purpose. And by creating and disseminating new knowledge and scientific breakthroughs, universities set the stage and a high benchmark against which all future advances will be made. At their very best, universities are forces for good and agents of change.

This past year, Washington University medical researchers continued to play key roles in the global battle against COVID-19, including the development of a new saliva test that provides results within a day and without the special swabs and reagents that have been in short supply. Another important advancement in the era of COVID-19 is a relatively simple and rapid blood test that can predict — within a day — which COVID patients are at highest risk of severe complications or death.

At the McKelvey School of Engineering, researchers found that air pollution may bear part of the blame for the rapid proliferation of the virus responsible for the spread of COVID-19.

In other fields of inquiry, university researchers continue to serve as catalysts for positive change locally and globally.

At the Brown School, a new report recommended reforms to help the national struggle with the issue of police violence, while another addressed the impact that HIV/AIDS has had on children who have been orphaned by the disease in Uganda, showing that even modest economic interventions can make a big difference.

At the medical school, the fight goes on against diseases like Alzheimer's disease and cancer. Alzheimer's disease researchers have shown that levels of a specific protein in the blood rise as amyloid plaques form in the brain two decades or more before common symptoms arise, making it a promising blood test for early diagnosis of Alzheimer's

disease. Meanwhile, a new broad collaboration of scientists in academia and industry, co-led by researchers at the School of Medicine, have identified the most important features of protein fragments helpful in the design of better immunotherapies against cancer.

At the intersection of engineering and medicine, brain-computer interface technology licensed from the university has helped create a first-of-its-kind device that helps people disabled by stroke regain significant control over their arm and hand function by using a wearable robotic exoskeleton that assists with opening and closing the hand based on the patient's thoughts.

Scientists in both Arts & Sciences and McKelvey Engineering continue to search for solutions to the global challenges of sustainable energy resources. Chemistry researchers have developed a method to store energy in red bricks, one of the world's cheapest and most familiar building materials; and researchers in the Department of Energy, Environmental & Chemical Engineering have developed a system that can provide the valuable resources of water and electrical energy from one source — wastewater.

As Washington University students slowly adjusted to the new normal of college life during a time of COVID, they continued to find outlets for their energy and creativity. An art student created a multidisciplinary "cancer tool kit" to capture her own experience with the disease; a student majoring in business and art founded a pop-up market for immigrant and refugee artists; and an engineering student helped develop Project Covid, a mobile app that gathers information about the virus and disease from a select list of credible sources.

Perhaps the biggest news of the year, announced just a few months after the fiscal year ended, was the establishment of the university's new need-blind undergraduate admissions policy, made possible by the extraordinary returns of the university's endowment and a \$1 billion commitment in endowed funding to support undergraduate and graduate students. This commitment will have a lasting impact on Washington University students, their families, and the society we serve.



Understanding the Endowment: Investment Strategy and Process

Washington University Investment Management Company (WUIMC) believes that the use of specialized external investment managers is the most effective way to meet its investment objectives. The successful implementation of WUIMC's investment strategy, which is built on the following important pillars, is a key contributor to securing the university in perpetuity.

Fundamental Orientation: The characteristics of each individual portfolio holding, rather than macroeconomics, are prioritized to build a collection of businesses representing exceptional investments. Risk management requires a fundamental understanding of the characteristics and behavior of all underlying investments and requires a holistic view of the portfolio;

Aligned Interests: WUIMC's partners generate wealth by producing exceptional returns and are paid for this exceptional performance, not by raising and accumulating assets or charging high management fees;

Concentration: WUIMC partners with managers who build concentrated portfolios, and WUIMC will selectively deploy capital directly into public and private businesses in explicit partnership with those managers;

Diversification: Diversification efforts are focused on the evaluation of individual businesses across the entire endowment, rather than by allocating dollars to specific asset classes;

Equity Oriented: Over the long term, WUIMC believes equity-oriented assets will likely outperform and this view is reflected in portfolio construction and asset allocation;

Time Horizon: Permanent capital and an intergenerational time horizon allows WUIMC to invest with conviction over long periods of time.

When WUIMC enters into a partnership, an expectation is set for all parties to serve the university's mission and be aligned on investment strategy as well as principles.

Led by Chief Investment Officer Scott Wilson, the WUIMC team is responsible for sourcing new and maintaining existing partnerships. New opportunities are sourced from a sophisticated network resulting from the team's engagement with asset managers, company management teams, industry experts, and select peers. Committed to diversity, the team casts a wide net to capture the largest selection set of partners across the globe, with diverse backgrounds, strategies, firm sizes, and stages of maturity. WUIMC has no restrictions on investing capital with new managers that meet WUIMC's investment criteria, which enables investment relationships with smaller firms and/or firms that are newer to the investment industry.

WUIMC also believes company-specific, fundamental bottom-up diligence leads to idiosyncratic idea generation. Upon sourcing ideas, the team implements a robust on-the-ground diligence process to fully understand the dynamics of what the university will own and how it fits in the portfolio. The diligence process begins with research and analysis to review a potential partner's thesis, approach, and ability to repeatedly implement the strategy consistently. Upon the initial review and screening, the team will conduct multiple in-person meetings with the potential partner firm. WUIMC meets not only with the senior investment leadership, but also with analysts, traders, and operations professionals to ensure that the partner aligns with the pillars mentioned above. The team also engages with the senior management team of the underlying portfolio companies to gain additional perspective on the investment thesis and to further develop WUIMC's network for sourcing additional investment opportunities.



Prior to making any investment, WUIMC conducts a full review of legal documents to ensure all contractual terms are in alignment with the university’s mission and objectives. WUIMC is proactive in negotiating fees and business terms, as well as future participation rights. If acceptable terms are not met, WUIMC will not move forward with the investment.

As part of WUIMC’s strategy to concentrate the endowment portfolio while maintaining appropriate diversification, the team strategically determines sizing of each investment opportunity. The WUIMC team is comfortable making larger investments in fewer partnerships to ensure returns are not diluted due to small position sizes and overly diversified portfolios. WUIMC will also engage with partners to further concentrate the endowment by opportunistically investing additional capital in a partner’s highest conviction names. These single name concentrated investment opportunities may be in public or private companies and are required to be underwritten by WUIMC using its on-the-ground diligence process.

WUIMC’s long-term approach and the endowment’s perpetual life are a competitive advantage for investing. WUIMC enters all relationships focused on a long time horizon; one that will survive and should generate outstanding returns over multiple market lifecycles. This long-term nature provides strategic partners the ability to execute long-dated theses without the pressure to meet liquidity and cash demands of short-term focused investors.

Diversity and Inclusion

The WUIMC board is committed to diversity, equity, and inclusion in its oversight of the investment selection process and in the hiring practices for the WUIMC team. WUIMC understands that diversity of background, thought, and ideas on the board, among the WUIMC staff, and in the consideration of investment managers will inevitably lead to better investment processes and outcomes. This understanding has prompted the development of an increasingly diverse staff and active discussions regarding efforts to diversify the board.

One of the most important things that the WUIMC team does to create diverse representation in its manager base is to consider, meet with, and perform diligence review on a large number of prospective investment managers, many of whom have women and/or minorities participating in the leadership or senior management of the firm. By creating this extensive pipeline during the diligence process, WUIMC has generated a group of investment managers with a strong representation of diverse individuals.

A recent review of the university's portfolio shows that, of the endowment assets managed by firms based in the United States, more than one-third of those assets are managed by diverse-led firms, as compared to 12% in the broader U.S. investment industry.¹ Similarly, on a global basis, more than one-third of the endowment's assets are managed by diverse-led firms.

¹ Davielle Walker, Billy Nauman, "Ethnic and Racial Diversity at Asset Management Firms," FUNDfire, Fall 2017.

Endowment Glossary of Terms

Endowment: A pool of capital (usually charitable contributions of money or property), 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

Managed Endowment Pool (MEP): A pool of capital managed by WUIMC that includes the vast majority of the endowment plus additional long-term operating assets of the university

Restricted Endowment: Endowment funds that are restricted in use per the donor's wishes. Restricted endowment funds cannot be redirected to pay for projects, ideas, or positions contrary to the original purpose of the gift

Unrestricted Endowment: Endowment funds that can be used at the discretion of the university because the donor provided no restrictions as to the purpose of the gift. These gifts are used to supplement other sources of funds in the university's operating budget

Payout: The annual amount distributed from the endowment, established by the Endowment Spending Policy. The 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 3.0 to 5.5% of the five-year average market value per unit of the endowment



Governance and Statement of Investment Principles: Practicing Responsible Stewardship

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 intergenerational 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 and begins with establishing and communicating a strong set of investment principles.



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.

Commitment to Diversity. The university's commitment to diversity, equity, and inclusion is an integral element of the path forward. The university and WUIMC are committed to building both a diverse and inclusive investment organization and roster of partners. To accomplish its goals, WUIMC must draw on talents, thoughts, and experience of diverse and inclusive teams and partnerships. Continual evaluation is necessary to ensure WUIMC is not fostering or enabling institutional constraints, limitations, and/or biases.

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 continues to 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 approximately 10% 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 2021, total endowment spending was \$366 million, of which \$140 million was distributed to the Danforth Campus and \$129 million to the Medical Campus. Additionally, \$97 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 (50%); facilities (19%); professorships (17%); and scholarships (14%).

The fiscal year 2021 payout rate as a percentage of the five-year average market value per unit of the endowment was 4.7%, and the payout rate as a percentage of the fiscal year 2020 market value per unit of the endowment was 4.4%. Due to the uncertainty surrounding the financial impact of COVID, spending from the endowment remained flat between fiscal years 2020 and 2021.

Endowment payout per unit rose nine out of the last 10 years. Endowment payout per unit in fiscal year 2021 was 30% higher than it was 10 years ago, while the total dollar payout, including spending on new endowments, has risen 66% over the same period.

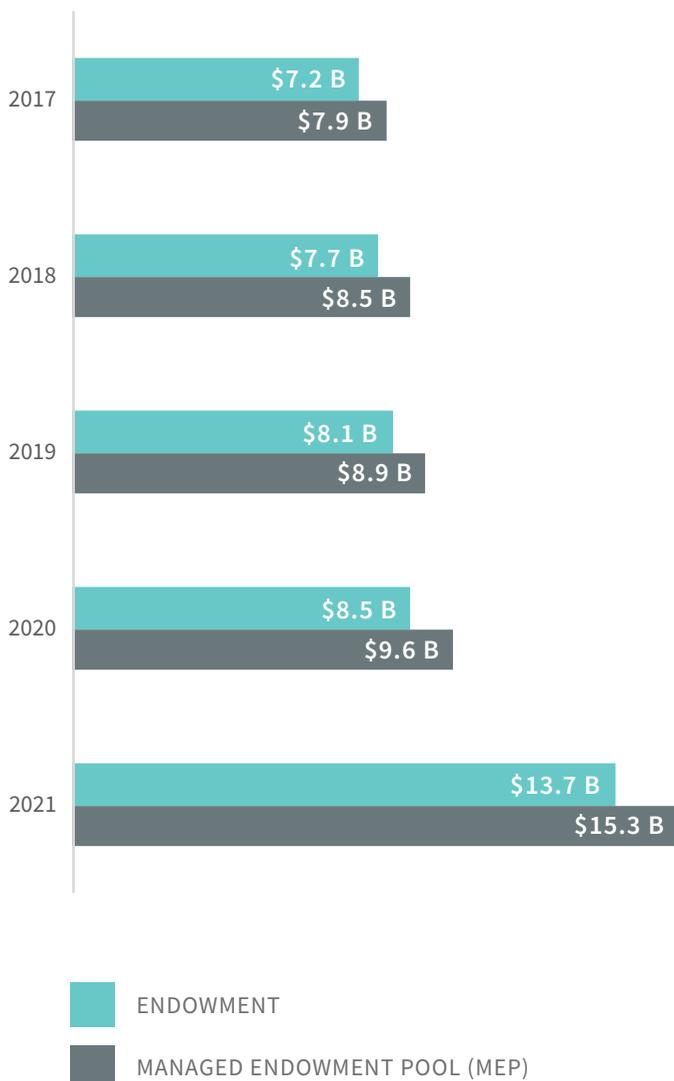
TOTAL ENDOWMENT PAYOUT (\$ MILLIONS)



Investment Strategy and Performance

The endowment was valued at \$13.7 billion as of June 30, 2021, reflecting an increase of \$5.2 billion from the prior year-end value. This included investment gains of \$5.4 billion, endowment gifts of \$79 million, and other net transfers of \$7 million in fiscal year 2021. Spending distributions to the university totaling \$366 million were made in fiscal year 2021.

MARKET VALUE AS OF JUNE 30 (\$ BILLIONS)



Investment Strategy

Washington University Investment Management Company (WUIMC) is responsible for managing the Managed Endowment Pool (MEP), which includes the vast majority of the endowment plus additional long-term operating assets of the university. As of June 30, 2021, the MEP was valued at \$15.3 billion.

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.

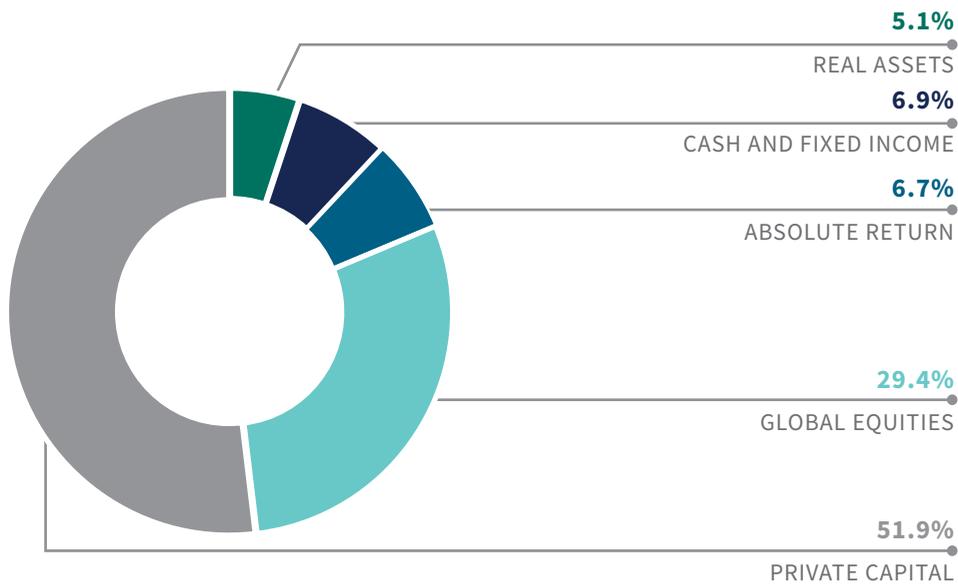
The WUIMC team pursues a strategy of long-term investing, taking advantage of the perpetual nature of this institution. It searches for equity-focused external investment managers with intellectual curiosity and a healthy skepticism of the status quo. WUIMC strategically concentrates the portfolio, allowing 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, and drawing on the talents, thoughts, and experiences of a diverse group of individuals.

Asset Allocation

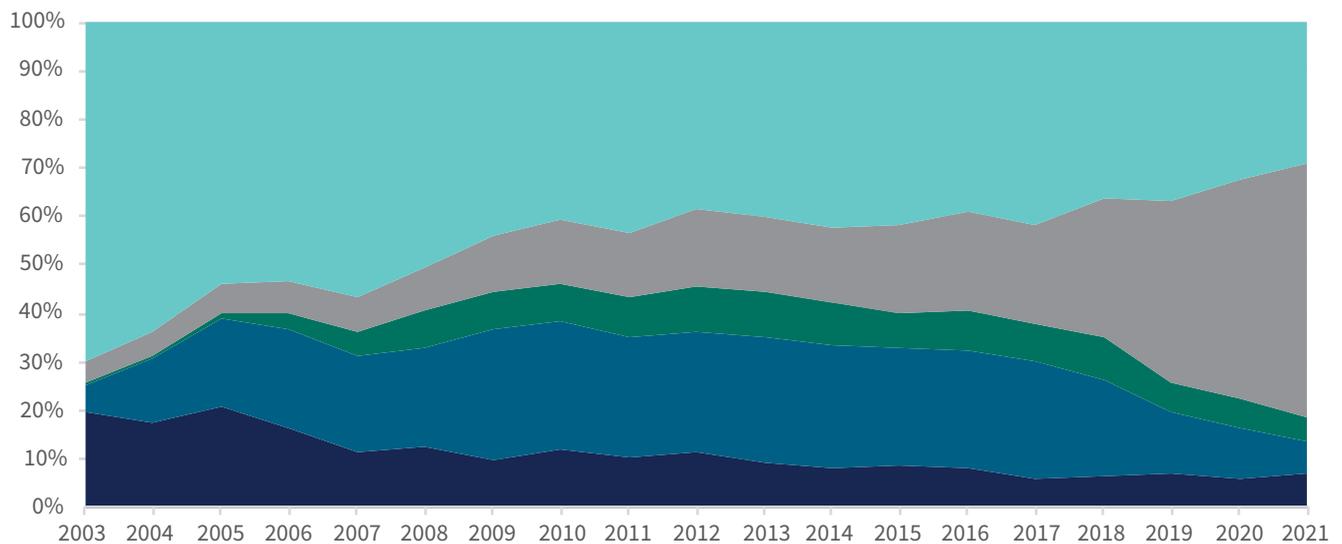
WUIMC has adopted a policy of Strategic Asset Allocation (SAA) to provide the highest probability of achieving the university’s objectives based on historical returns and established portfolio practices. WUIMC recognizes that equity-oriented assets generally outperform other asset classes over long periods 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, 2021 (ACTUAL)



ASSET ALLOCATION OVER TIME — FY THROUGH JUNE 30, 2021 (ACTUAL)



Benchmarking Performance

Although the best measure of success for the Managed Endowment Pool (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.

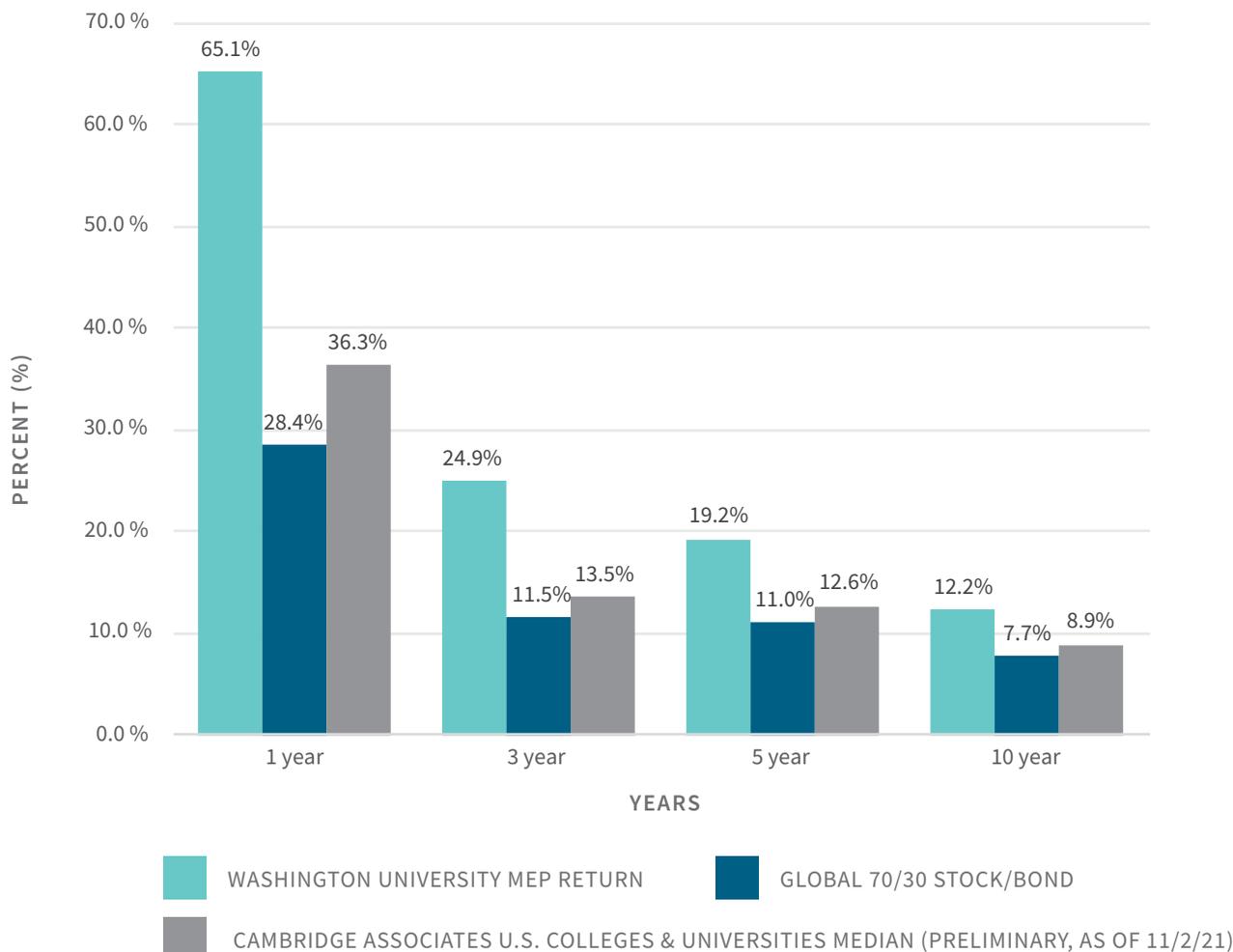
The MEP is expected to exceed a blended benchmark composed of 70% global equities and 30% global bonds. This passive benchmark is then compared to the investment performance of the MEP, which enables an evaluation of WUIMC’s active investment strategy.

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 2021 Investment Performance

The MEP returned 65.1% in fiscal year 2021, outperforming a global 70/30 stock/bond index by 3,662 basis points. Overall performance was driven by multiple managers across asset classes. The Private Capital allocation, which returned 81.9% for the fiscal year, and the Global Equities allocation, which returned 71.7% for the fiscal year, were primary contributors. The Absolute Return and Real Assets allocations were also positive contributors to performance, returning 25.9% and 34.1% respectively.

ANNUALIZED RETURNS FOR PERIODS ENDING JUNE 30, 2021



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 long periods of time within established risk boundaries. WUIMC believes that the long-term pursuit of financial returns is inherently biased toward investments that have a positive impact. Companies whose core goods and services address major social and environmental issues — climate change, food insecurity, lack of access to health care, resource degradation — tend to have business models that are more sustainable and the accompanying potential to generate significant returns over the coming decades. With that in mind, WUIMC seeks to partner with skilled investment managers that are able to identify and source investment opportunities in businesses that are attempting to solve these complex problems and create disruptive solutions.

As part of the ongoing effort to highlight the complexion and tone of investments within the endowment portfolio, WUIMC has categorized the endowment’s portfolio holdings according to impact. Because there are no impact reporting standards that apply across the various asset classes of the portfolio, WUIMC has developed its own framework for portfolio impact reporting. 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 of the 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 31% of the endowment is currently invested by WUIMC’s external managers in positive impact companies. More than 19% of the endowment (more than \$2.9 billion dollars) is currently invested in companies providing access to health care, job creation, and education, and in companies pursuing scientific innovation. Furthermore, many of the positive impact investments in areas such as clean tech and renewable energy are venture-capital-backed startups where the initial investment dollars are small, but the potential disruption, impact, and investment returns are significant. Notably, the endowment has virtually no investments in coal, underscoring market forces at work as coal becomes a decreasing segment of global energy markets.

POSITIVE IMPACT AREAS	DESCRIPTION	EST. % AT 6/30/21	\$ VALUE INVESTED
HEALTH CARE	Access, affordability, and innovations in life sciences and disease research	10%	\$1,579 M
FINANCIAL INCLUSION	Accessibility to affordable and secure financial products and services	8%	\$1,152 M
TECHNOLOGY	Access to technology; advancements in manufacturing, semi-conductors, and communications	7%	\$1,066 M
FOOD TECH & SUSTAINABLE AGRICULTURE	Expansion of global food supply and sustainable agricultural practices	1%	\$229 M
EDUCATION & EMPLOYMENT	Provisions of early childhood education, vocational training, and human resource development	1%	\$219 M
HOUSING	Investments in affordable housing, construction, and fair-lending programs	1%	\$175 M
PRODUCT & LABOR SAFETY	Development of workplace and consumer product safety, mobility devices, and data security/privacy	1%	\$157 M
CLEAN TECH & RENEWABLE ENERGY	Enhancement of solar, hydro and wind power, grid engineering, water management, and zero-emission transportation	1%	\$155 M
TOTAL POSITIVE IMPACT		31%	\$4,733 M



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



NotCo

NotCo is a Chile-born food-tech company whose goal is to remove animals from food production while not compromising on taste or nutrition. NotCo's current product line includes milk, ice cream, ground beef, chicken, and mayonnaise. Consuming animal-based food products such as milk and meat contributes to excess energy and water use as well as carbon dioxide ("CO2") emissions. The company's milk product, NotMilk, produces 74% less CO2 and requires 74% less energy during production compared to traditional processes. The company employs a proprietary algorithm to create an optimal combination of fruits and vegetables to match the taste and nutritional characteristics of dairy and meat. Products are currently available in the United States, Canada, Brazil, Argentina, Chile, Mexico, Colombia, and in global QSR chains such as Starbucks, Burger King, Papa Johns, among others with plans to expand to Asia and Europe and offer more products such as white meats and seafood.



Cerebras Systems

Cerebras Systems is a California-based computer systems company dedicated to accelerating artificial intelligence (AI) and deep learning. The company was founded in 2016 to create a next-generation computer chip specifically designed to train deep-learning models. The company's CS-2 computer is the fastest AI computer in existence and contains a collection of industry firsts, including the Cerebras Wafer Scale Engine (WSE-2), the largest chip ever built. For AI, large chips process information more quickly, producing answers in less time. Neural networks that in the past took months to train, can now train in minutes on the CS-2 powered by the WSE-2. Cerebras' customers include supercomputing facilities, national laboratories, and pharmaceutical and life sciences companies, where the CS-2 enables faster drug discovery and more accurate health care recommendations based on vastly larger datasets.





The Endowment at Work

Universities have long memories. Like most large organizations, they measure where they are today against where they were five, 10, or, in the case of Washington University, 168 years ago. We look back and see how far we have come.

But universities must also look forward. They must dream and plan and constantly ask, “what if?” Beyond that creative envisioning lie other important questions: Will we be able to afford to change as the world changes? Will we have the financial strength to thrive and grow into an unknown future?

Ensuring the answer to these questions is always yes is the work of WashU’s endowment. As outlined in the following pages, three essential areas of funding must be assured if a university is going to prosper for years to come.

Scholarships

Endowment gifts for scholarships, fellowships, and student success enable the university to meet the full needs of students, beginning with tuition and room and board. They also provide for academic materials and computers, study abroad and professional development opportunities, and stipends that make it possible for them to participate in unpaid internships, conferences, site visits, and summer fieldwork.

Deanships and Professorships

Innovative and dedicated faculty and deans are at the core of any great university and are one of the key indicators of its academic strength. The endowed support of Washington University faculty is critical to the university’s ability to attract and retain professors and administrators of the highest caliber.

Research

The work of research and discovery — whether in the sciences, the arts, the humanities, or the social sciences — happens slowly and with determination over succeeding generations of talented investigators and scholars. Endowed funds for specialized research centers, clinics, studios, and institutes are essential if the university is to continue to tackle the world’s complex problems into the 22nd century and beyond.



LARRY E. THOMAS, BSBA '77,
PICTURED WITH OLIN SCHOLARSHIP STUDENTS



KELLI P. WASHINGTON, BSBA '94

LARRY THOMAS SCHOLARSHIPS

Investing in student potential

Generally speaking, scholarship support is seen as just that — financial assistance for students as they make their way through college, and that support is crucial for so many. But scholarships are more like wise investments than one-time gifts. They are about foresight and belief in the future impact scholarship recipients will have on the world. Scholarships make lasting impact possible.

Take for example WUIMC Board director Kelli P. Washington, BSBA '94, who attended Olin Business School on a full scholarship. She is now the managing director of research and investment strategy at the Cleveland Clinic Investment Office, where she shapes investment policy across multiple portfolios for one of America's most important and respected medical institutions. Her education and expertise help Cleveland Clinic advance the lifesaving work of its health professionals every day.

Or consider Kurt Summers, BSBA '00, also a scholarship recipient at Olin, who served as treasurer of America's third largest city from 2014 to 2019. In this role, he leveraged his oversight of Chicago's \$8 billion investment portfolio to change the city — especially its underserved neighborhoods and citizens — for the better. In 2017, he launched the Chicago Community Catalyst Fund, a community-focused investment effort that used seed money from the city as well as private-sector dollars to expand access to capital in Chicago's low- and moderate-income neighborhoods.

And then there's the remarkable LiaFaith "Li" Reed, AB '11, who experienced homelessness as a teenager in Chicago. Her outstanding achievements in high school helped her secure two WashU scholarships. After graduating, she taught middle school with Teach for America while earning a master's degree in education policy and leadership, before

eventually becoming director of strategy and logistics for the District of Columbia Public Schools. Reed graduated from Harvard Law in 2020. She now works as an associate for one of America's oldest law firms, Cravath, Swaine & Moore, located in New York City. "My goal is to improve opportunities and strengthen legal protections for poor people of color," Reed says.

These three Washington University alumni — spanning three decades — have three things in common. They needed help financing their WashU educations. They are committed to making a positive impact in the world. And they each received a scholarship established by alumnus Larry E. Thomas, BSBA '77.

Larry Thomas was a scholarship recipient himself, so he understands both the need and the possibility of financial support. As a senior at Olin, he interned at St. Louis-based Edward Jones. After graduating, he joined the firm's corporate bond trading department and became a principal five years later, the first person of color to do so. He has championed the recruitment of Olin students at Edward Jones ever since.

He established his first named scholarship in 1986 through an annual gift. Since then, he has established multiple endowed and annual scholarships. Most recently, he committed \$3 million to establish the Lawrence E. Thomas Danforth Scholarships for students participating in the William E. and Elizabeth Gray Danforth Scholars program.

Through the years, Thomas has volunteered his time to encourage others to support scholarships. Among those who accepted that challenge many years ago was Kelli Washington, who, in an act of full-circle generosity and gratitude, established her own scholarship in Larry's name.

VIJAY RAMANI

ROMA B. AND RAYMOND H. WITTCOFF
DISTINGUISHED UNIVERSITY PROFESSOR OF
ENVIRONMENT AND ENERGY

Discovering how to ‘get there and back’

For decades, the idea of human missions to planets like Mars has been the stuff of dreams and science fiction. But thanks to Vijay Ramani, the Roma B. and Raymond H. Wittcoff Distinguished University Professor of Environment and Energy in the McKelvey School of Engineering, that dream is one step closer to reality.

The challenge of such missions, of course, is having enough fuel to get astronauts there and back. In order to live even temporarily on Mars, not to mention to return to Earth, astronauts will need to manufacture some necessities such as water and fuel while stationed on the Red Planet.

Ramani’s research team has designed a way to extract oxygen and hydrogen from the salty water that exists on Mars. They tested their device, called an electrolyzer, in a simulated Martian atmosphere. It can produce 25 times more oxygen than current systems, while also producing hydrogen, which could be used to fuel the astronauts’ trip home.

The device could potentially have an impact on Earth, too, as it opens up the oceans and other brackish waters as viable oxygen and fuel sources. Possible applications include creating oxygen on demand in submarines and for researchers exploring uncharted environments in the deep sea. The underlying technologies enabling the brine electrolyzer system are the subject of a patent filing through the university’s Office of Technology Management and are available for licensing.

The electrolyzer system is just one of Professor Ramani’s areas of potential influence in the field of energy. In 2016, he and his team received a \$2 million grant from the Advanced Research Projects Agency-Energy (ARPA-E) in the Department of Energy to create a new membrane and battery chemistry for grid-scale storage of electric energy. The batteries store electricity in chemical solutions while charging and release electricity on demand while discharging. This grant was renewed in 2020 with an additional \$2 million in funding. Ramani’s group has invented and patented novel membrane separators derived from inexpensive commercial polymers, as well as a new flow-battery chemistry that brings down the



cost of energy storage. The technologies underpinning the flow battery system have been awarded two patents through the university’s Office of Technology Management that are available for licensing.

Vijay Ramani joined the Washington University faculty in 2016 as the inaugural Wittcoff Distinguished University Professor of Environment and Energy. Ramani’s professorship is one of four established by Roma B. Wittcoff, BSBA ’45, emeritus trustee, and the late Raymond H. Wittcoff, who was also an emeritus trustee. Deeply devoted to Washington University and the St. Louis region, the couple spent decades serving in leadership roles with St. Louis civic and cultural organizations. Among his many contributions, Ray Wittcoff helped bring public television to St. Louis as a co-founder of KETC/Channel 9 and chaired the board of directors of Washington University Medical Center and the board of Jewish (now Barnes-Jewish) Hospital. Roma is a member of the School of Medicine National Council, where her husband also served, and is an emeritus member of the Brown School National Council. The university recognized the couple’s invaluable leadership with the Robert S. Brookings Award in 1993. The School of Medicine presented them with the Second Century Award in 1995.



MOLLY BRODSKY, AB '18



THE CLASS OF 2021 CIVIC SCHOLARS COHORT

STERN FAMILY CIVIC SCHOLARSHIPS

Making a difference in communities

In August 2017, not long after a man deliberately drove his car into a crowd of peaceful protesters in Charlottesville, Virginia, a nervous Washington University senior named Molly Brodsky, AB '18, addressed the incoming class of first-year students during convocation. In an eloquent speech that would long be remembered by those in the audience, she said:

“Right now, more than ever, in this week of hatred and injustice, it’s time to invest in those around you. Invest in your community and invest in this place. That may mean stepping into some new ways of living, listening, and standing up. You may not have placed yourself in that box labeled activist or ally before now, but it’s time to act in ways that set the stage for what this campus and this country could look like. You can both create yourself and create this community.”

Even as an undergraduate, Brodsky understood the power of community involvement, in part because she was a Civic Scholar at the Gephardt Institute for Civic and Community Engagement.

The Civic Scholars Program launched in 2011. Scholars apply as sophomores and go on to participate in intensive academic course work and leadership training during their junior and senior years, in addition to completing a substantial Civic Summer project. Past projects include a

prescription drug recycling program, the delivery of support services to formerly incarcerated individuals, and research into health disparities among immigrant populations.

Mickey and Debbie Stern, longtime supporters of Washington University and parents of an alumna, have supported the program and its precursor for more than two decades, to date funding 15 Stern Family Civic Scholars. Their generosity helps prepare the kind of civic leaders needed to address complex societal challenges and extend the reach of the university and its students beyond the classroom and into the community. The Sterns have supported civic leadership development opportunities for WashU students since 2000, first through the Stern Summer Service Scholarship and the Stern Social Change Grant, and more recently through the Civic Scholars Program.

The impact of these endowed gifts is far-reaching. Molly Brodsky is now the community dialogue program manager at Green For All, a national program of the Oakland-based Dream Corps, which works at the intersection of the environmental, economic, and racial justice movements. “The Civic Scholars Program prepares the kind of civic leaders we need to address the complex and entrenched challenges facing society,” says Stephanie Kurtzman, the Peter G. Sortino Director of the Gephardt Institute.





MICHAEL TOBONI, MD, DINEO KHABELE, MD,
AND MATTHEW POWELL, MD

MITCHELL AND ELAINE YANOW PROFESSOR OF OBSTETRICS AND GYNECOLOGY

Advancing women's health care

Dineo Khabele, MD, a renowned physician-scientist and women's health care advocate, did not set out to pursue a career in medicine. After graduating from St. Stephen's Episcopal School in Austin, Texas, she enrolled at Columbia University in New York City with an interest in English and political science. "I arrived on campus at the height of the AIDS epidemic," says Khabele. "There was a tremendous sense of urgency surrounding the fight against AIDS. The crisis brought human rights advocates, public health workers, and medical professionals together in new ways, and the scientific community was under enormous pressure to develop clinical advances to combat the disease."

The national health crisis helped Khabele consider how her passions and interests could intersect through medicine and health care. She switched gears and completed her undergraduate and medical degrees at Columbia, with a specialization in gynecological oncology. She held faculty and leadership posts at Meharry Medical College, Vanderbilt University, and University of Kansas School of Medicine before joining the faculty at Washington University School of Medicine in 2020.

Khabele, the Mitchell and Elaine Yanow Professor and chair of the Department of Obstetrics & Gynecology, is known for her leadership instincts, outstanding skills as a researcher, and passion for women's health. Her recent research has provided the basis for a clinical trial evaluating a new approach to treating ovarian cancer when it no longer responds to chemotherapy. Khabele's laboratory, which is funded by the National Institutes of Health (NIH), uses tumor samples to study ovarian cancer in mice. Such samples are used to investigate how DNA damage affects genes and how genes

are regulated — or dysregulated — in ovarian cancer. Her lab also studies inflammation in ovarian cancer and molecular pathways that lead to cell death.

Dedicated to raising awareness of women's cancers and cancer health disparities through her scientific and scholarly work, Khabele serves on multiple medical and scientific advisory boards, including the NIH, the Ovarian Cancer Research Alliance, the Foundation for Women's Cancer, and Ovarcome. She serves as program director for the Society of Reproductive Investigation and co-chair of the Health Disparities Committee of the Society of Black Academic Surgeons, among many other national and local roles. In recognition of her scientific achievements, she was inducted into the American Society of Clinical Investigation in 2019 and the Alpha Omega Alpha Honor Medical Society in 2021.

Khabele's work is supported through an endowed professorship established by another dedicated OB-GYN, Mitchell Yanow, MD '41, and his wife, Elaine Levine Yanow. The couple also established a medical student scholarship. Mitchell Yanow's 50-year career began as a WWII naval doctor. After completing his bachelor's degree, doctorate, and residency at Washington University, he served on the clinical faculty for over three decades. In his practice, he delivered over 15,000 babies and was known as a pioneer in infertility treatment. He was recognized with a Distinguished Alumni Award in 1993.

Endowed professorships ensure that Washington University will continue to attract and retain outstanding faculty members like Dineo Khabele, who will help shape the future of medicine and improve quality of life through her research, teaching, and advocacy.

JOANNE KNIGHT BREAST HEALTH CENTER AND BREAST CANCER PROGRAM

Breakthrough research and innovative treatments

One in eight U.S. women — about 13% — will develop invasive breast cancer at some point in their lives. In 2021, doctors expected an estimated 281,550 new cases of invasive breast cancer to be diagnosed in women in the U.S. alone.*

In St. Louis, the Joanne Knight Breast Health Center at the Alvin J. Siteman Cancer Center at Washington University School of Medicine and Barnes-Jewish Hospital is committed to regular screenings and early detection. The Breast Health Center provides more than 40,000 imaging exams annually, including diagnostic workups. In addition, they provide services such as breast cancer treatment and follow-up visits.

The Knight Breast Health Center plays an integral role in Siteman's comprehensive strategy to prevent breast cancer through a community partnership that listens to the voices of cancer survivors, advocates, community-based health care representatives, clinicians, and academics.

Research is at the heart of the Knight Breast Health Center and holds the promise for long-term impact on this life-threatening disease. Recent advancements include imaging innovations — including the development of cancer imaging glasses to better guide surgeons; a major interdisciplinary initiative focusing on the causes of breast cancer at the molecular level: genomic research into the development of vaccines and inhibitors; and quicker and more targeted radiation treatments.

Current research at the Joanne Knight Breast Health Center includes a study funded by the National Institutes of Health investigating the potential of a new imaging technique, called diffuse optical tomography, to reduce unnecessary breast biopsies. A separate study partners with the medical oncology department to investigate the role of breast density in development of breast cancer.

Over the years, the generosity of Joanne Knight and her late husband, Charles F. Knight, have made so much of this progress in breast health research, educational outreach, and patient care possible. The St. Louis couple and longtime civic



leaders donated \$5 million to the Siteman Cancer Center in 2005 to support these vital programs, establishing and endowing the Joanne Knight Breast Health Center and Breast Cancer Program. Previously, Charles Knight, former CEO of St. Louis-based Emerson, was instrumental in securing a \$10 million commitment from Emerson's Charitable Trust and the Anheuser-Busch Foundation to expand vital research space and support at Siteman.

Their impact will last for generations, perhaps until sometime in the future when no such center is necessary.

*American Cancer Society. Cancer Facts and Figures 2021. Atlanta, Ga: American Cancer Society; 2021.

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