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Endowment definition

Introduction

In this study we examine endowments within the educational sector, focusing on some of the oldest Colleges in the United Kingdom (UK), with a view to capturing investment perspectives among institutions with ostensibly similar objectives. Colleges in Oxford and Cambridge, popularly referred to as Oxbridge, are eleemosynary corporations. The term eleemosynary means that their support comes from charitable giving. The universities of Oxford and Cambridge, however, are not eleemosynary but civil corporations created by Statute. When the Colleges were founded, benefactions made to these institutions were for the sustenance of the Colleges, not for passing on to others. It was the work of the College—achieving the purposes of the Head of the College and its appointed Fellows—that fulfilled the objective of the charity. Thus, the Head of the College and Fellows acted like trustees but were also the beneficiaries of the foundation.

Unlike charitable institutions, Colleges did not bear responsibility for collecting funds and distributing them among needy students. Nor were the students meant to be beneficiaries of the College unless they were appointed as Scholars, as opposed to Commoners who paid their way. The corporate endowment was never meant to benefit students, though the Governing Body of each College had, and still has, the power to spend the funds as it sees fit, as long as the activity supports the objects of the College. The purposes that endowments are created to serve also determine the manner in which they are invested.

Today the endowments of the Colleges and the Universities of Cambridge and Oxford consist of funds generally regarded as for the long term, and which fundamentally underpin and sustain the operation of these institutions at their desired level of activity. While educational organizations have common objectives, individual Colleges interpret their investment objectives as being slightly different to that of other Colleges, often resulting in remarkably dissimilar asset allocation decisions. Colleges consistently make long-term commitments, such as the appointment of faculty members, to maintain their regular activities, but the level of individualism and diversity manifested in their investment approaches is remarkably engaging. When viewed as a cohesive unit or collegiate university, their combined assets and their asset allocation are closer than one might expect to those of educational endowments in the United States with pioneering investment strategies.

In broad terms, educational endowments share many features of other foundations and charities. Most enjoy favourable tax status and operate within a time horizon that is perpetual. For some foundations, the perpetual nature of their mission may not be an obligation. The Atlantic Philanthropies, a Bermuda-based entity with several affiliate organizations in the United States, Britain and Ireland, redefined their purpose in early 2002, opting to spend down their $4 billion endowment by 2020. The decision to do so was based on the Founder's belief in the importance of 'Giving-while-Living', and that the next generation of philanthropists are best left to address the issues of the future. Atlantic's limited life helped drive their decision to concentrate resources on targeted programmes to fulfil their stated purpose 'to bring about lasting changes in the lives of disadvantaged and vulnerable people'.

Even without a time-bound horizon, spending at rates that wipe out endowed assets may constitute a legitimate option for some trustees, if the nature of their current spending is considered urgent; for example, funding research to cure a certain type of ailment or some killer epidemic. Educational institutions, particularly ones that have been around for centuries, would be failing their fiduciary obligations if they followed the same strategy.

Universities in the UK generally derive their income from a combination of student fees, research grants, residential, catering and conference charges, donations and legacies, in addition to income from endowment investments. In contrast to foundations, public universities receive a substantial transfer of resources from the government sector. While educational institutions generally have multiple sources of income, foundations often derive the bulk of their income from their endowment assets.

The largest foundations in the world derive a significant portion of their resources from their investment-related activities, with gifts and donations very occasionally boosting capital inflows. At the current time, the Bill and Melinda Gates Foundation is an exception, receiving huge infusions of capital from its founders and from the Foundation's co-contributor, Warren Buffet. Founders of large endowments, such as Henry Wellcome, Andrew Carnegie, John D. Rockefeller, or Joseph Rowntree, are not around to make such donations. It is worth mentioning that the new generation of philanthropists, such as Intel's co-founder, Gordon Moore and his wife Betty, or Pierre Omidyar, the founder of eBay, are actively engaged in doing good. Many of the philanthropists of today are as imaginative in their giving as their predecessors were a century ago. But the current generation of philanthropists believe more in

Giving-while-Living. Many of the older foundations do not accept gifts as a matter of policy. This means that these foundations require relatively stable income flows to sustain their established level of grant-making.

Educational institutions, on the other hand, receive annual gifts and donations in addition to the fees they receive from the government or directly from their students. As they are not entirely reliant on endowment income for operations, any disruption in such flows does not immediately threaten their existence. The impact of annual giving on endowment assets may appear insubstantial, but it plays a major role in boosting asset values over the long term, as well as on spending on educational objectives and enhancing new initiatives. The experiences of Harvard, Yale, and the Carnegie Institution over the course of the twentieth century provide insight into the importance of donor support. While differences in investment policies no doubt account for some of the gap in the assets of these institutions today, the absence of continuing gift inflows constitutes the fundamental reason for Carnegie's failure to keep pace with the wealth of Harvard and Yale.[1] Oxford and Cambridge may struggle to match the endowment assets built up by their transatlantic Ivy League peers, such as Harvard, Yale, Stanford, and Princeton, as differences in approaches to investments and fund-raising play a critical role in determining objectives, policies, and performance within the endowed sector.

While theories of endowment asset management have evolved more recently, College endowments in Oxford and Cambridge have been in existence for centuries. The manner in which these institutions have come to embrace modern approaches to investment management provides useful insights for other institutions facing similar dilemmas. Though the focus is on the challenges and rewards of investment management by educational endowments, particularly Oxbridge ones, the issues raised concern all long-term investors whose ultimate aim is real capital growth and sustainable (or increasing) spending power. Investment success improves with better understanding of dilemmas that may arise at various stages of the asset management process. Attempting to understand the nature of risks associated with such a process can be educational for all investors.

Oxford and Cambridge: A brief background

Oxford and Cambridge are independent and self-governing institutions, consisting of the central University and the Colleges. Today, there are 39 Colleges in Oxford and 31 in Cambridge. The Colleges, independent and self-governing institutions, form a core element of each University, to which they are related in a federal system, not unlike those in the United States of America. Through their collective body, the Conference of Colleges in

Oxford, for example, they engage in discussion and debate on key strategic academic decisions within the University.

In Oxford, the ultimate body of the University is the Congregation. Congregation has responsibility for approving changes in or additions to the Statutes and Regulations of the University, which define the corporate governance structure. Under Oxford's governance structure, the principal policymaking body, introduced in 2000, is Council. Council comprises 26 members, including those elected by Congregation, representatives of the Colleges and four members from outside the University. Council reports upwards to Congregation, which comprises over 3,700 members of the academic, senior research, library, museum, and administrative staff, and which decides on resolutions put by Council and is the ultimate decision-making body of the University. Council is responsible for the academic policy and strategic direction of the University, and operates through major committees. Council is responsible to the Higher Education Funding Council for England for meeting the conditions of the financial memorandum between the Funding Council and the University. The Council is chaired by the Vice-Chancellor and advised by a range of committees, including the Investment Committee, which is responsible for the management of the University's investment portfolio.

Cambridge is similarly a confederation of Colleges, Faculties, and other institutions. The Regent House is the governing body and principal electoral constituency of the University. It has more than 3,800 members, comprising University Officers, Heads and Fellows of Colleges, and certain other categories of individuals defined by Ordinance. The Regent House has important responsibilities in electing members to the Council and the Board of Scrutiny, as well as in making appointments to a number of University bodies. Cambridge's Council is the principal executive and policymaking body, consisting of 21 members, of whom 19 are elected members of the University. It has overall responsibility for the administration of the University, for defining its mission, for planning its work, and for the management of its resources. The Council has many standing committees, but among the most important committees with executive responsibilities is the Finance Committee, whose main obligations are to account to the Council for the receipts and payments of the University and all its Departments and subsidiaries; to budget and advise the Council on the trends in University income and expenditure; to control the University's investments; and to maintain and care for all University sites and buildings.

Each College in Oxford or Cambridge, on the other hand, is a charitable corporation established by Royal Charter and governed by a Head and a Governing Body comprising of a number of Fellows, many of whom also hold University posts. The Governing Body is responsible for the strategic decisions of the College, and for its overall management of finances and assets. Governed by Statutes under the Universities of Oxford and Cambridge Act 1923, the Colleges are exempt charities under the Charities Act 1993. They are subject to the jurisdiction of the court but are exempt from all supervisory or regulatory powers of the Charity Commissioners, though the degree of exemption may change once impending charity legislation passes into law. Thus, Colleges are autonomous, self-governing institutions with their own property, endowment, and income.

There is no clear date of foundation for Oxford or Cambridge but teaching existed at Oxford in some form in 1096 and developed rapidly from 1167, when King Henry II banned English students from attending the University of Paris. By 1201 Oxford University was headed by a *magister scolarum Oxonie*, on whom the title of Chancellor was conferred in 1214, and in 1231 the Masters were recognized as a *universitas* or corporation. The University of Cambridge was established in 1209 when scholars taking refuge from hostile townsmen in Oxford migrated to Cambridge. They were numerous enough by 1226 to have set up an organization, represented by an official called a Chancellor, and they arranged regular courses of study, taught by their own members. King Henry III took them under his protection as early as 1231. The two universities were formally incorporated by Act of Parliament in 1571. Oxford and Cambridge thus have no founders and no charters. Their common law powers to enact rules for the regulation of their internal affairs are supplemented by the power to make Statutes which was conferred upon them by the Universities of Oxford and Cambridge Act 1923.

For the purpose of this study, the 36 Colleges listed in the *University of Oxford Accounts of the Colleges*, and the 30 in the *Cambridge University Reporter* were approached. For accounting purposes, the three Colleges in Oxford which do not have Royal Charters (Green, Kellogg, and St Cross) are departments of the University and their annual financial figures are included in the main University accounts. The College Accounts discussed here are therefore those of the University's 36 Chartered Colleges. Similarly, in Cambridge, Homerton College, which does not have a Royal Charter, is not included in the University's 30 Chartered Colleges. Homerton College was invited to participate as we wished to include in our study an example of a College actively engaged in building its endowment.

Among the Colleges invited to participate, 33 in Oxford and 26 in Cambridge accepted. The Investment Committees of the two Universities also participated. When we conducted our interviews in 2003, we met Sir Alan Budd, Chairman of the University of Oxford's Investment Committee, and his team. As Cambridge was in the midst of considerable restructuring, we were unable to meet Sir Alan's equivalent. We met Joanna Womack, a long-time member of Cambridge University's Investment Committee. As we go to press, the recently appointed Chief Investment Officer (CIO) for Cambridge University, Nick Cavalla, had not joined; and Oxford University had announced the appointment of Richard Oldfield as Chairman of its Investment Committee, which had been reconstituted. This committee had decided to appoint a CIO to oversee its investment office. We have endeavoured as far as possible to reflect the rapid changes taking place in the endowment management of these institutions.

In total, 61 responses were received from 69 institutions (a participation rate of 88 per cent). The Colleges that declined to participate were Christ's, Hughes Hall, King's, Lucy Cavendish, and Queens' in Cambridge, along with Harris Manchester, Jesus, and Magdalen in Oxford. Apart from Harris Manchester and Hughes Hall, deemed too small for our survey, the other Colleges did not provide any reason for their lack of participation. Other associated bodies, such as the Gates Trust (Cambridge) or the Rhodes Trust (Oxford), were not included in the study; nor were Oxford University Press (OUP) and Cambridge University Press (CUP), though these organizations make an important contribution to the activities of the universities to which they are attached. OUP, for example, contributes 4 per cent of the total income of Oxford University.

Most of the participating institutions responded to a detailed questionnaire, which required specific responses with qualitative nuances, and were interviewed in depth. The interviews took place in 2003–4. The transcriptions of the interviews were subsequently sent to the participants for verification. The Investment Bursars of Colleges and relevant members of the Investment Committee of the two Universities were the main participants. The study benefited from the frank and forthcoming observations of participants.

The study also benefited from the publication of financial statements of the Colleges in the recommended format, known as SORP (Statement of Recommended Practice). The first set of accounts in the new format for the Cambridge Colleges appeared in 2004, reflecting data for the financial year ending June 2004. Colleges in Oxford started reporting in the new format the previous year. The second set of accounts for Oxford Colleges in the new format, for the year ending July 2004, contained a higher level of disclosure for all the Colleges compared to the first set of accounts issued by Cambridge Colleges. When the 2003–4 accounts were published, five Colleges in Cambridge failed to report in the new format. In the 2004–5 accounts, two Colleges in Cambridge continued to report in the old format. Thus, aggregate data for Cambridge Colleges are not available for comparison with Oxford Colleges. Data in the public domain contributed to our analysis.

For the sake of convenience, participating institutions, including the two universities, are referred to as Colleges. The data presented in our study are intended to provide an overview of the management of endowed assets of institutions in Oxford and Cambridge at the cusp of change. Little information was, and still is, in the public domain. Information given to us on asset allocation, for example, at the end of financial year 2002–3, is most likely to have altered by the time of publication. Financial market conditions have changed in addition to the process of internal changes in management approaches, such as the move towards total return among all Oxbridge institutions. Gonville and Caius College in Cambridge, for example, had 5 per cent in hedge funds and private equity in 2002–3; this allocation had risen to 13 per cent in hedge funds by March 2006 with a target allocation of 20 per cent of the endowment portfolio in hedge funds. As Colleges do not disclose detailed asset allocation in their annual reports, the data collected during the course of our interviews are intended to provide a snapshot of the way things were in 2003.

As annual asset allocation data are not publicly available, it has not been possible to analyse such information over a longer period. Even the distribution between property and other investment assets was only made available with the publication of the new accounts. More information will hopefully become available in future as a change in the status of these institutions is anticipated, once the impending Charities' Bill, due to be passed into law in late 2006, has had an effect. Schools, for example, operating under the superintendence of the Charity Commission in the UK commonly provide an elaborate review of their activities. Oxbridge institutions will most probably need to move towards such a review over the next several years. Much of the information in the published accounts today on subjects as diverse as asset allocation, investment performance, costs, or fund-raising is incomplete or inconsistent. Hence, any analysis is subject to the limitations inherent in the available data.

Comparison has been drawn frequently with contemporary US practice, particularly among peer group institutions such as Yale and Harvard, reflecting their pioneering efforts at addressing investment issues faced by independent educational institutions with substantial endowments. The authors do not seek to recommend US practice; the objective of this study is to provide an understanding of alternative approaches to critical aspects of endowment asset management. As information on endowment asset management, especially among educational endowments in Europe and Asia, is not in the public domain, this study is limited to comparative data from the United States, where the sector is more evolved, more transparent, and under greater public scrutiny. As foundations and endowments face similar dilemmas, institutions can learn from the American experience and develop individual strategies without repeating old errors and without slavish adherence to what Harvard, Yale, and Princeton did a decade or more ago.

Restricted versus Unrestricted funds

Endowments typically consist of Specific (or restricted) and General (or unrestricted) funds, managed on a pooled or segregated basis by each institution. Most Colleges have a main portfolio of assets such as a General Endowment

Fund, also known variously as the Consolidated, Amalgamated, Unrestricted, or Corporate Fund. General endowments represent the corporate capital of Colleges and include bequests and gifts where the use of the capital and income, or only the income, is for the general purposes of the Colleges. At Oxford, 80 per cent of the Colleges' endowment assets are designated for the 'general' purposes of these institutions.

Universities, on the other hand, receive funds that are designated for a 'specific' purpose. In 2005, for example, 99 per cent of Cambridge University's endowment funds were for 'specific' purposes. The corresponding proportion for Oxford University was 79 per cent.

While the University funds are more specific, the Governing Body of a College has greater flexibility in choosing to designate part of its unrestricted endowment funds for a particular purpose. Notwithstanding the Universities and College Estates Act 1925 (amended 1964), there are no significant external regulatory constraints imposed today on how the permanent endowment assets are invested, save the ones imposed by the institutions themselves—such as specific income requirements or socially responsible investment (SRI) constraints. Oxford and Cambridge institutions have recently embraced a 'total return' approach in managing their assets.

Some College endowments are held in Trust Funds, also called Specific or Restricted Funds, which are constrained to the extent that these funds are required to be spent in a certain way to retain their Trust status. Specific Endowments are those bequests and gifts where the use of the capital and income, or only the income, is for a specific purpose or activity designated by the donor and which can only be used for that purpose or activity. Sometimes, the income generated from such endowments may be directed towards activities that lie outside the current objects of the College. There appear to be no substantive limits on the way in which these assets are invested.

'We are constrained by what these specific endowment funds can be spent on,' explained one bursar, 'not what they are invested in. That said, it can be argued that our investment decisions are constrained as certain of the Trust Funds have to be spent in a certain way.' Most Colleges, regardless of their age, have a large number of such funds amalgamated into a pool. To illustrate, in Cambridge, Gonville and Caius has some 120 specific Trust funds within its Consolidated Trust Fund, a unitized collective vehicle within the endowment. Newnham, also in Cambridge, has some 280 such funds. In Oxford, Christ Church reports 95; and Balliol and Somerville respectively have about 175 and 110 funds.

Individual trusts managed by the Universities tend to be numerous: Oxford University, for example, has over 630 trust funds. The total number of Specific Trusts within each university would therefore run to thousands. The picture is similar in the United States; the endowments at Yale and Harvard are composed of thousands of specific funds with a diverse range of designated purposes and restrictions. Harvard University's endowment consists of 10,700 separate funds, the majority of which are restricted for specific purposes similar to those in the universities of Cambridge or Oxford.

Individual endowments for specific purposes are usually pooled, creating a vehicle similar to a mutual fund or unit trust. This enables broad diversification of investments among asset classes, thereby providing an appropriate balance between return and volatility. Pooling also permits economies in oversight, investment management, and accounting costs. Though endowment assets are invested as a pool, each College maintains the identity of each component fund in their accounting record. Most university or college endowments consist of an investment pool composed of several individual funds with a wide variety of purposes and restrictions. Donors frequently specify a particular purpose for their gifts, creating endowments to fund professorships, scholarships, fellowships, prizes, books, libraries, buildings, and other miscellaneous purposes.

Depending on the institution, endowment funds usually consist of gifts, some of which are restricted by donors to provide long-term funding for designated purposes, along with others that are unrestricted, which the endowed institution is free to invest and spend as it sees fit. According to the notes to the 2003–4 accounts of Girton College, Cambridge, for example, the policy on management of reserves sums up how these institutions treat their various endowment assets:

> The income or expendable capital of restricted funds is used only for the purposes for which the funds were originally given or bequeathed to the College. The income or expendable capital of unrestricted funds may be used either for the general educational purposes of the College or for a particular purpose designated by Council. The Council may designate or re-designate unrestricted funds as it deems appropriate depending on the College's financial situation. The permanent capital of restricted and unrestricted funds is invested for the long-term with a view to maintaining its real value. Expendable capital is also invested for the long term unless expenditure is planned. Expendable capital required for specific projects is held in the form of cash.

It is only within the last 50 years or so that, along with other philanthropic institutions, Oxford and Cambridge Colleges have been able to exercise freedom of choice in their investment decision-making. Even that discretion was fairly limited as, until 2000, UK universities' tax-exempt status limited them to spending only income earned from their endowment investments, not via capital gains. Thus, many of these institutions operated under mandatory 'income only' spending rules, which meant that assets were managed to produce the requisite cash flow via dividend income which was tax free. Many foundations, endowments, and charities in the UK continue to invest for income in high-yielding companies long after these tax incentives were withdrawn.

Funds constrained by asset mix have diminished following the Trustee Act 2000, though an income-oriented asset allocation influenced manager selection. From 1945, when Oxford University's Trust Pool was established, the Trust's investments were managed by a single manager within a balanced fund. It was only in 1997, when the Investment Committee decided that the returns obtained from their balanced mandate were suboptimal that a more diversified structure was adopted, and a wider range of financial assets and specialist managers were considered. There was a major shift in the investment strategy of the University of Oxford's Trusts Pool as a result of its review. As implementation of a new asset allocation takes time, the University was until recently in the process of doing so.

Prior to this restructuring, the University of Oxford obtained legal advice on the spending rules pertaining to income and capital and it became evident that a 'total return' approach could be used, implying that expenditure could be financed from the sale of assets and that the University need not secure its expenditure only through income. This significant decision enabled the University to move away from an income-oriented investment policy towards a total return one, enabling the Trust to restructure its management arrangements. This had profound consequences on the University Investment Committee's ability to alter asset allocation and, with it, manager selection. Ten years ago, the Trusts Pool had two managers; today it has over 20 managers. It also has exposure to investments in private equity and hedge funds, in addition to equity, fixed income, and property.

The endowment of Cambridge University was similarly managed by a single asset manager, F&C Asset Management, from January 1981. Before then, the University's Amalgamated Fund set up in 1956 (now known as the 'Cambridge University Endowment Fund') was managed by an individual, Oliver Dawson, who was with stockbrokers Buckmaster & Moore, which was taken over by F&C. Thus, the Cambridge University endowment was effectively managed by a single individual followed by a single asset manager since 1956. The establishment of an Investment Office in 2006, with a CIO, for the management of the University's endowment and the investments of its related bodies therefore marks a new direction in the history of Cambridge University.

Many Oxbridge Colleges have Trust funds, which are registered charities in their own right, and are typically engaged in fund-raising for the institution concerned. These funds support the educational and related activities of the Colleges. But, the Trust assets do not form part of the Endowment. The Trust funds are sometimes invested differently and have diverse asset allocation policies, reflecting their individual aims and objectives. These charities, also with permanent endowments, exist to support the operations of the Colleges, although their assets are kept quite distinct from that of the College endowment assets. A few examples of such College Trust funds are Balliol's

Appeal Trustees Fund, Magdalen College Development Trust, the New College Development Fund, the Perse Trust (Gonville and Caius, Cambridge) or The Isaac Newton Trust (Trinity College, Cambridge).

Similarly, the two University endowments exclude individual Trust funds and related endowments that are not invested in the University's Trust or Deposit pools managed by the University Investment Committee. Until 2004–5, for example, the University of Cambridge's Endowment, represented by the Amalgamated Fund and the Deposit Pool were managed separately from the Gates Cambridge Trust (worth £150 million in 2004–5). The Gates Cambridge Trust, like the Rhodes Trust in Oxford, is an international scholarship programme; but unlike the Rhodes Trust it is now part of the University's Endowment. So is the University of Cambridge's Learning and Examination Scheme, renamed Cambridge Assessment (worth £85 million), which was managed separately along with the Associated Trusts (worth £92 million). CUP's assets (worth £25 million) were not part of the University endowment pool. Cambridge pooled these assets (with CUP being deferred until 2005–6 for operational reasons) making its 2004–5 consolidated Endowment worth over £1 billion. This also enabled Cambridge to establish an Investment Office with full-time professional management staff.

Oxford has not taken this route in aggregating its various endowments into a single unit for efficient management. The James Martin 21st Century Foundation, worth £69 million for example, is currently managed externally to the University's Trust and Deposit Pool. The amount is included as a 'Specific' endowment in its consolidated accounts. The Rhodes Trust, with assets worth around £150 million, is also managed separately from the University's; but its assets are not consolidated into the University's Endowment. The Rhodes Trust, based in Oxford is an educational charity whose principal activity is to support scholars selected from various countries to study at the University of Oxford, but it is an independent entity. OUP's investments are also managed separately, though OUP provides direct and significant support to the University's overall revenue.

Size of endowment assets

The endowment assets reported by Cambridge University and its constituent Colleges in 2003–4 amounted to £2.6 billion ($4.6 billion). For collegiate Oxford, endowment assets totalled £2.3 billion ($4.2 billion). The combined value of endowment assets of the 68 institutions (36 Colleges in Oxford, plus 30 in Cambridge along with the two University endowments) at the end of financial year 2004 amounted to £4.8 billion ($8.8 billion), compared with $22 billion for Harvard and $13 billion for Yale. The distribution of

Table 1.1. Distribution of endowment assets in per cent, 2003–4

Endowment	Oxford	Cambridge	Oxbridge
£1–10 m	11	16	13
£10–20 m	22	13	18
£20–30 m	14	13	13
£30–50 m	22	16	19
£50–75 m	8	19	13
£75–100 m	8	13	10
£100–200 m	11	—	6
£200–400 m	3	3	3
£400–600 m	3	—	1
£600–700 m	—	6	3
Total	**100**	**100**	**100**

Source: University of Oxford, Financial Statement of the Colleges 2003–4; Cambridge University Reporter, Accounts of the Colleges 2004–5.

endowment assets among these Oxford and Cambridge institutions is illustrated in Table 1.1.

In 2003–4, most (63 per cent) of the Oxbridge endowments were valued at less than £50 million. Only 13 per cent of endowments contained assets worth more than £100 million; and just 7 per cent of institutions had endowment assets in excess of £200 million. Those worth more than £200 million included Trinity College and St John's College in Cambridge, as well as the University of Cambridge; in Oxford, only St John's College had more than £200 million worth of endowment assets, in addition to the University of Oxford.

The average endowment of a Cambridge College was £65 million compared with Oxford's £52 million. Only two educational institutions in the UK, Trinity College in Cambridge and the University of Cambridge, had endowment assets worth over $1 billion compared with 47 such institutions in the United States, up from 39 institutions in 2003.[2] The two University endowments of Oxford and Cambridge failed to make the $1 billion mark in 2004, despite Oxford University's endowment assets showing a gain for the year. Cambridge University's reported assets declined from £490 million in 2002 to £467 million in 2004.[3] In 2004–5, Cambridge University consolidated the various endowments under its aegis; the dollar value of its restated endowment for 2003–4 rose to just over $1 billion. The value of the consolidated Cambridge endowment by the end of financial year 2005 was over £1 billion.

Comparisons with the size of endowment assets of top universities in the United States are typically made to illustrate the lack of resources available to UK institutions. Size of assets under management can have an impact on some aspects of asset allocation. For example, an endowment's smaller size may restrain its ability to invest in alternative assets and strategies, which tend to

Table 1.2. Size of top 10 US educational endowments in $ billions

Institution	2004	2003	2002
Harvard University	22.1	18.8	17.2
Yale University	12.7	11.0	10.5
University of Texas System	10.3	8.7	8.6
Princeton University	9.9	8.7	8.3
Stanford University	9.9	8.6	7.6
MIT	5.9	5.1	5.4
University of California	4.8	4.4	4.2
Emory University	4.5	4.0	4.5
Columbia University	4.5	4.3	4.2
Texas A&M	4.4	3.8	3.7

Source: 2004 and 2003 National Association of College and University Business Officers (NACUBO) Study.

be illiquid in nature and carry a higher element of risk. Income requirements may also influence asset allocation policy for a small endowment. An endowment's ability to afford independent investment advice and performance analysis may also be a limiting factor. Thus, an institution with less than £10 million of assets under management simply cannot afford to replicate the sort of strategies pursued by institutions with assets above £500 million.

Table 1.2 shows the top 10 university endowment assets in the United States over the past 3 years. Seven of the top 10 largest educational endowments in the United States are independent institutions such as Harvard, Yale, Princeton, and Stanford. The top two, namely Harvard and Yale, have endowments which are significantly larger than that of Cambridge and Oxford, though the collegiate endowments of Cambridge and Oxford are closer to those of MIT and Columbia.

While the University of Texas System was ranked third in the overall US educational endowment league table in 2004, and remains among the largest endowments in the world, the top public universities in the United States have endowments whose assets are closer in size to those of collegiate Oxford and Cambridge. Taking into account the funding structure of universities like Cambridge and Oxford, the size of endowments perhaps needs to be compared with that of the top public institutions in the United States. Table 1.3 shows the top 10 endowments held by public universities in America.

Endowments in Cambridge and Oxford have also grown substantially over the past few years. In 2002–3, inclusive of Colleges and University, Cambridge and Oxford with £2.1 billion ($3.3 billion) and £1.9 billion ($3.0 billion) respectively of endowed assets compared favourably with top public educational endowments in the United States. By 2003–4, Cambridge and Oxford with endowment assets worth £2.6 billion ($4.6 billion) and £2.3 billion ($4.2 billion) respectively compared even better with their institutional peer

Table 1.3. Size of top 10 US endowments held by public institutions in $ billions

Institution	2004	2003	2002
University of Texas System	10.3	8.7	8.6
University of California	4.8	4.4	4.2
Texas A&M	4.4	3.8	3.8
University of Michigan	4.1	3.5	3.4
University of Virginia	2.8	1.8	1.7
University of Minnesota	1.5	1.3	1.3
Ohio State University	1.5	1.2	1.1
University of Pittsburgh	1.4	1.2	1.1
UNC Chapel Hill	1.3	1.1	1.1
University of Washington	1.3	1.1	1.1

Source: 2004 and 2003 NACUBO Study.

group in the United States, though the endowment of the University of Texas System remains significantly larger than that of other public universities worldwide. With Cambridge consolidating its group endowments in 2004–5, the combined value of the endowments of Cambridge University and its constituent Colleges was closer to £3 billion ($5.2 billion), while Oxford's combined endowment assets were worth £2.7 billion ($4.8 billion) in 2005.

Cambridge is richer, with more endowment assets under management; the average value of endowment funds per College is also higher in Cambridge. But there were more Colleges in Oxford with endowment assets over £100 million; in 2003–4, for example, Cambridge University, Trinity College, and St John's College had assets worth over £100 million. In Oxford, in addition to the University, six Colleges had assets over £100 million: St John's, Christ Church, All Souls, Nuffield, Magdalen, and Jesus. By July 2005, a few more Colleges had joined the over £100 million group, such as Merton and The Queen's in Oxford. In Cambridge, Gonville and Caius and Jesus also reported endowment assets worth over £100 million while King's at £99 million worth of endowment funds was virtually a member of this elite group of Oxbridge Colleges.

Table 1.4 shows the size of endowment assets at Cambridge and Oxford compared with that of the top 10 US educational endowments in 2004–5.

Table 1.5 shows the size of endowed assets at Oxford and Cambridge compared with that of the top public educational institutions in the United States in 2004–5.

The size of the endowment may not represent the whole picture. The disparity in funding between public and independent institutions in the United States becomes highly visible when we compare endowment assets per full time equivalent (FTE) student among the top 10 universities with the largest endowments. The differences in endowment assets per FTE student, driven by enrolment numbers, illustrate that students at Princeton, Harvard,

Table 1.4. Largest educational endowments: Oxbridge versus Ivy League

Institution	Endowment $ b
Harvard University	25.5
Yale University	15.2
Stanford University	12.2
University of Texas System	11.6
Princeton University	11.2
MIT	6.7
University of Cambridge*	**5.3**
University of California	5.2
Columbia University	5.2
Texas A&M	5.0
University of Michigan	4.9
University of Oxford**	**4.8**

* Including Colleges and related bodies.

** Including Colleges.

Source: 2005 NACUBO Study; University of Cambridge; University of Oxford.

Table 1.5. Oxbridge compared with top US public institutions

Institution	Endowment $ b
University of Texas System	11.6
University of Cambridge*	5.3
University of California	5.2
Texas A&M	5.0
University of Michigan	4.9
University of Oxford**	**4.8**
University of Virginia	3.2
University of Minnesota	2.0
Ohio State University	1.7
University of Pittsburgh	1.5
University of Washington	1.5
UNC Chapel Hill	1.5

* Including Colleges and related bodies.

** Including Colleges.

Source: 2005 NACUBO Study; University of Cambridge; University of Oxford.

and Yale are significantly wealthier compared with their peer group in the University of Texas System. Harvard and Yale had 19,060 and 11,271 FTE students respectively in 2003–4 while the University of Texas System reported 133,039 FTE students.

Endowment assets per FTE student in the United States are even higher in some specialized educational institutions such as The Rockefeller University ($7.7 million per FTE) or the Franklin W. Olin College of Engineering

Table 1.6. Value of endowment and assets per FTE student, 2003–4

Institution	Endowment $ b	Assets per student $000
Harvard University	22.1	1,162
Yale University	12.7	1,131
University of Texas System	10.3	78
Princeton University	9.9	1,476
Stanford University	9.9	686
MIT	5.9	569
University of California	4.8	23
Emory University	4.5	404
Columbia University	4.5	233
Texas A&M	4.4	54

Source: 2004 NACUBO Study.

($2.1 million per FTE) with 193 and 150 students respectively. But these institutions do not have large endowments.[4] Table 1.6 illustrates the size of the total endowment versus endowment assets per FTE student in 2003–4 among universities with the largest endowments in the United States.

It is encouraging that despite significant funding gaps between the top US and UK institutions, endowment assets per FTE student in Oxford ($237,000) and Cambridge ($234,000) were considerably higher in 2003–4 than at wealthier public universities in the United States. By 2004–5, endowment assets per FTE student in Oxford had risen to $269,000. At Cambridge the aggregation of the different endowments into a centralized fund meant that endowment assets per FTE student rose to $296,000 in 2004–5, with Cambridge and Oxford trailing behind Princeton, Yale, Harvard, Stanford, and MIT. Table 1.7 illustrates the comparative size of endowment assets per FTE student in 2004–5 in Oxford and Cambridge compared with the top US institutions.

Oxford and Cambridge feature among the top 10 universities with the largest endowment assets per FTE students in the world. But the difference in endowment assets per FTE student between Oxbridge and the highest ranked US educational establishments is worth emphasizing. Princeton has over five times the amount of endowment assets per FTE student compared with Cambridge, and over six times that of Oxford. Yale and Harvard too have almost five times more endowment assets per FTE student than Cambridge.

What is perhaps not apparent is that, due to the collegiate structure of Oxford and Cambridge, it is possible for a student at a less wealthy College to miss out on the facilities available to a student reading for the same degree at a richer College in the same University. Sometimes, these seemingly minor differences, such as lack of student housing or sporting facilities, impact not only the quality of life but also reflect on academic achievement. Thus, a

Table 1.7. Endowment assets per FTE student, 2004–5

Institution	Endowment/FTE student $000
Princeton University	1,663
Yale University	1,354
Harvard University	1,331
Stanford University	822
MIT	652
University of Cambridge*	***296***
University of Oxford**	***269***
Columbia University	252
University of Michigan	103
University of Texas System	86
Texas A&M	60
University of California	25

* Including Colleges and related bodies.
** Including Colleges.
Source: 2005 NACUBO Study; University of Cambridge; University of Oxford.

student at St John’s College, Cambridge, would have significantly higher endowment assets per FTE student ratio (£319,000 in 2004–5) compared with a student at New Hall (£60,000) in the same University. Similarly, a student at Christ Church would have more endowment assets per FTE student (£309,500 in 2004–5) compared with a student at St Edmund Hall (£43,000).

The endowment and its value per full-time student give us an idea of the importance of the endowment within an institution. But two institutions of a similar size may have different objectives with very different costs of operation. It is worth looking at the ratio of the value of the endowment to the expenditure of the institution concerned, as it gives us an idea of the resources available to the institution to support its activities. Thus, Harvard’s expenditure in 2003–4 was 11.6 per cent of the value of its endowment while Yale’s expenditure was 13.2 per cent. These numbers may vary marginally from year to year, but they have been similar over recent years. Unless the market falls substantially in any one year, such a ratio suggests the stability of the endowment in sustaining operations. To express the same ratio as the endowment to expenditure ratio, it is 8.6 for Harvard and 7.6 for Yale. Princeton has a higher ratio (14.1 in 2003–4), and there are other examples of academic institutions in the United States with high endowment to expenditure ratios among institutions with endowment assets over $1 billion.

In the case of Oxford and Cambridge, it is interesting that collectively the Colleges have an attractive endowment to expenditure ratio of 9.3 and 9.9, respectively, with Colleges like Trinity (Cambridge) and All Souls (Oxford) recording ratios as high as 36.1 and 30.5 respectively in 2003–4. In fact, there are eight Colleges in Cambridge and 12 Colleges in Oxford with higher endowment to expenditure ratios compared with that of Harvard's. The same is not true of the two Universities; both these institutions annually spend more than the total value of their endowment assets. The endowment to expenditure ratios of the universities of Oxford and Cambridge are 0.9 for both institutions. The combined ratio for collegiate Cambridge, that is the Colleges and the University, was 3.0, while that for Oxford was 3.3, compared to 8.6 for Harvard, 7.6 for Yale, and 14.1 for Princeton in financial year 2003–4.

The scale of spending at Cambridge and Oxford may not compare with that of Princeton, Yale, or Harvard, but they are the wealthiest in the UK. The unique historical developments within Oxford and Cambridge resulted in the Colleges having their own endowments, independent and separate from that of the University. If the College endowments are included, then Cambridge and Oxford tower above other educational institutions in the UK in terms of their endowment wealth. An analysis of endowment assets per FTE student in these institutions reveals the extent to which Oxford and Cambridge, thanks to the endowments of their member Colleges, benefit from such support. Endowment assets per student at Trinity College, Cambridge, were estimated to be close to that at Harvard and Yale.

Total endowment assets for the 165 educational institutions or associations in the UK listed in the *Higher Education Financial Yearbook, 2005–6* were £2.5 billion. This is less than half the value of the combined endowments of the individual Colleges and Universities of Cambridge and Oxford. The relative wealth of Cambridge and Oxford in the UK is therefore not in doubt. Excluding the endowment of the Colleges, the universities of Oxford and Cambridge account for over a third (35 per cent) of total educational endowment assets in the UK. The history and wealth of these institutions partly explains why they are in the public eye; and why their actions, be it their admissions policy or medical research using animals, are under constant public scrutiny.

The assets represented in Table 1.8 are the endowment assets held by the universities of Cambridge and Oxford, and do not include those of the Colleges.

Average endowment size in the UK rose from £14.2 million in 2002 to £15.2 million in 2004, with the top 10 endowments representing two-thirds (64 per cent) of assets in the higher education sector. However, only three universities' endowments were worth more than £100 million compared to eight Oxbridge Colleges, not to mention the two Universities. According to the 2004 *NACUBO* Endowment Study, the average endowment size in the United States was $360 million, up from $321 million in 2003.[5] The average size of endowment in the United States at £198 million in 2004 was significantly higher than the average for the Colleges in Cambridge or Oxford. Apart from the two university endowments of Cambridge and Oxford, the remaining endowments did not come close.

Table 1.8. Size of top 10 university endowment assets in the UK, 2004

Institution	Endowment £ m	Assets per student £000 ($000)
University of Cambridge	470	129 (234)
University of Oxford	431	131 (237)
University of Edinburgh	156	8 (15)
University of Glasgow	97	5 (10)
University of Manchester	96	4 (7)
University of Liverpool	89	5 (9)
King's College, London	88	5 (9)
University College, London	78	5 (8)
University of Reading	77	7 (12)
University of Birmingham	60	3 (5)

Source: Higher Education Financial Yearbook, 2005–6; data for Oxford's endowment assets are from the University of Oxford. The HEFY 2005–6 shows Oxford's assets at £406 million, which was the size of the endowment in 2003. Cambridge University's 2005 accounts indicate endowment assets for 2004 at £467 million. Cambridge University has since consolidated its group endowments and the aggregate value for 2005 is closer to £1 billion.

Funding of higher education in the UK

Funding for higher education in the UK is derived largely from the government. While changes are anticipated, the government is expected to remain the major source of financial support for educational institutions. The three principal channels through which institutions receive government funding are: Council funds (which are for the general expenditure of an institution assessed and paid for by the Higher Education Funding Councils), Academic fees (which for UK students are paid for by Local Education Authorities on the basis of number of students and is determined by the academic course; non-EU students are charged directly on a full cost basis), and Research grants (which are paid on the basis of the research carried out by higher education institutions). These variable sources of income represented 79 per cent of the total income of UK academic institutions in 2004.[6]

Recognizing the effects of globalization and the need to redefine sources of comparative advantage in the face of more challenging competition from China and India, in addition to existing challenges from developed economies, the UK government recently conducted a strategic assessment of higher education in consultation with stakeholders. New partnerships, methods of funding, assessment, etc. were included in the agenda for the next five years with a view to providing a more stable funding environment in which institutions can adjust to the new fee arrangements. From 2006–7, for example, universities will have the power to vary the fees they charge directly to students, up to a maximum of £3,000 per year. Other changes in the funding of research in meeting new economic and social challenges, including investing in physical infrastructure, are afoot.

Table 1.9. Higher education funding in the UK: sources of income in per cent

Income source	2004	2003	2002	2001	2000
Funding Council Grants	39	39	40	40	40
Fees and Support Grants	24	24	23	23	23
Research Grants and Contracts	16	16	17	16	15
Other Operating Income	20	19	19	19	19
Endowment Income	1	1	2	2	2
Total Income (£ b)	**17.1**	**15.8**	**14.6**	**13.3**	**12.4**

Source: Higher Education Financial Yearbook, 2005–6.

Table 1.10. Sources of income: Universities of Cambridge and Oxford in per cent

	Breakdown for 2004		Breakdown for 2002	
Income source	Cambridge	Oxford	Cambridge	Oxford
Funding Council Grants	24	29	31	32
Fees and Support Grants	9	12	12	11
Research Grants and Contracts	27	36	33	35
Other Operating Income	35	15	12	15
Endowment Income	4	8	11	7
Total Income (£ m)	**644**	**458**	**447**	**427**

Source: Higher Education Financial Yearbooks, 2005–6, 2003–4

Table 1.9 depicts sources of income for universities in the UK over the past five years.

The historical distribution pattern of income from public sources—Council funding, Academic fees, and Research grants—which has been stable over the past several years may not be the best guide in forecasting future sources of income. Though small, the contribution from the endowment has failed to keep pace with growth in income from other operating sources, such as residence and catering as well as for conferences and other such events. Institutions have increasingly resorted to using subsidiary companies to carry out non-core activities on a commercial basis or to act as vehicles in the commercial development of businesses that spin out from research functions. The distribution of income received by the universities of Cambridge and Oxford, both of which have substantial endowments in the context of the educational sector in the UK, is significantly different from the sector aggregate. Table 1.10 illustrates this difference.

In 2004, aggregate income received by Oxford and Cambridge from public sources, that is Funding Council grants, Academic fees, and Research grants, was 60 per cent of total income while that for Oxford was significantly higher at 78 per cent. The major difference in such income distribution was the result of income derived from other operations. Cambridge received over a third (35 per cent) of its total income from other operating sources; its examination and assessment services alone contributed £151 million in 2004, compared to £57 million from academic fees and support grants and £37 million from the endowment. Endowment income for both universities remained low at 6 per cent and 4 per cent for Cambridge and Oxford respectively.

When compared with the education sector, the differences in the sourcing of income among these institutions are remarkable. Higher educational institutions received about 80 per cent of their overall income from public sources in 2004 while the endowment's contribution was negligible at 1 per cent. The universities of Cambridge and Oxford, on the other hand, derive considerably more income from their endowments and other operations. The endowments of Cambridge and Oxford thus play a more substantial role in funding their objectives, even if we disregard the Colleges. If the roles of the Oxbridge Colleges are taken into account, the overall significance of the endowment in the context of higher education funding in the UK becomes self-evident.

While Cambridge and Oxford are independent institutions, key differences in the management and funding of higher education in the UK over the past several decades may have constrained institutional ability to build up endowment assets over this period. At the same time, these institutions had to cope with real decline in income from their core activities. Historically, students contributed a much higher proportion of the operational income of the Colleges than is the case today. Until 1978–9, Colleges in Oxford and Cambridge determined tuition fees payable by students; and thus were in a better position to charge for the true cost of their services. Colleges had exercised great restraint in doing so, keeping the increases to below the increases in the University's costs. However, since they lost such control, the University system has been subjected to real cuts, and these cuts were applied to College fees as well.

For Mr Roger Van Noorden, Investments Bursar at Hertford College, Oxford:

> College fees as a proportion of the total revenue of Oxford Colleges, for example, declined from 37 per cent of income in 1979–80 to 30 per cent by 2002–3. Though by some definitions, overall student fees may have kept pace with growth in consumer prices, they have not kept up with growth in salaries, which comprise the largest expenditure of the Colleges. Also, as far as fee erosion is concerned, fees per head have declined faster than fees in aggregate for the Colleges. As academic sector salaries in the UK lag significantly behind salaries among Ivy League institutions in the US, there is cause for concern. Colleges have increased their Board and Lodging Charges from their own members (up from 20 per cent in 1979–80 to 24 per cent in 2002–3), and generated income from other sources such as conferences (up from 6.5 per cent to 9.5 per cent) along with private grants and donations (risen from 2 per cent to 5 per cent). The contribution from Endowment income fell from around 35 per cent to 31 per cent of overall income over the same period. There has been an increasing tendency to finance Colleges through higher charges and conference income, and for Colleges to collect grants and donations directly from non-public sources.

Andrew Murison, Senior Bursar of Peterhouse in Cambridge from 1994 to 2003, had a similar take on the subject. According to Murison, 'the Peterhouse Statutes required that its Tuition Fund, an annual income and expenditure account, should not habitually draw on the Endowment. The student body had to pay its own way. Unfortunately, this statutory requirement has fallen into desuetude since the Government has taken responsibility for paying—and therefore limiting—the fees it pays on behalf of students, with the consequence that income from teaching and support has fallen considerably over the years while expenses have soared.'

Today, income received by Colleges in Oxford and Cambridge fails to reflect the true nature of costs. According to one study, educating the average undergraduate was estimated to cost £18,600 per annum, against total income per student of £9,500. The figure for the average graduate student was broadly similar. The annual deficit was calculated at £27.8 million on teaching and £67.7 million on publicly funded research, almost £100 million per annum. Of the estimated total £18,600 cost per student, only 6 per cent was recovered through tuition fees. Of the remaining 94 per cent of the cost, the University contributed roughly half from private sources (principally endowment, earned income and donations) and government contributed the other half.[7] An estimate quoted by a Cambridge College with reference to shortfall in the funding of undergraduate education alone was broadly similar at £24 million.[8]

It is worth pointing out that over the past decade, the cost of attending Harvard College increased by 51 per cent, from $26,700 to $40,450 per year. Tuition costs at Princeton University rose by 77 per cent between 1989–90 and 1999–2000 to $25,430, while total costs rose 68 per cent over the same period, rising to $35,320. Even at government-funded state institutions in the United States, such as Berkeley and Michigan, there is a move to fund higher investment needs of these institutions by the university setting student fees rather than the government while retaining present levels of government funding.[9] In contrast, UK government funding per student has fallen by more than 40 per cent in real terms over the past 15 years. Oxford and Cambridge's endowment assets per FTE student failed to keep pace with that of Harvard and Princeton as a result of this long-term under-funding of education in the UK.

As students at Oxford and Cambridge currently pay around £1,150 (approximately $2,000) in tuition, with total expenses rising to £5,700 (approximately $10,000) annually, top-quality education in the UK is available at bargain prices. This has been secured at the cost of lower compensation for faculty, and lower investments in infrastructure such as its world-class libraries. The median annual salary for a full professor at Cambridge University in the UK is about £53,000 compared to £87,000 at Harvard and £76,000 at Yale, according to the University of Cambridge figures. Oxford starting salaries for lecturers can be as low as £20,000; sometimes, housing and meals are subsidized.

The recently published accounts of Oxford University's Colleges for the year to 31 July 2005 show strong returns on investment and a break-even at the operating level. However, the core activities of teaching, research, accommodating students, and caring for historic buildings remain heavily in deficit, and are subsidized from non-core income. Most significantly academic fees and tuition income fell in real terms by 2.6 per cent. On a combined gross income of £222 million, the Colleges reported an operating surplus of £0.4 million. Surpluses on sales of assets boosted this to £6.6 million. However, Oxford Colleges' core activities (teaching and research; the provision of food and accommodation to College members; and the care of much of the built environment of the University) rely on non-core income to sustain them.

Spending on these core activities during 2004–5 amounted to £195 million, compared with income on core activities (mainly from fees and board and lodging charges) of £104 million. Colleges funded the £91 million annual deficit on core activities through a combination of transfers from endowments; surpluses from conferences; and grants and donations, chiefly from alumni. It is only because of this income from their own resources that the Colleges are able to meet all their commitments: they fund £50 million of the collegiate University's academic staff costs; support a significant proportion of its research activity; provide about 95 per cent of its student accommodation; and are at the heart of the College's intellectual, cultural, sporting, and social life.

Oxford College endowments performed well in 2004–5; on a starting net balance of £1.81 billion, the Colleges achieved a total return of £413 million, an average gain of 23 per cent over the year. Spending from endowments fell slightly to £66 million (3.6 per cent of asset value). Fund-raising contributed £25 million to endowments, £6 million to building projects and £9 million to College bursaries and other operating activities. Commenting on the figures, Sir Michael Scholar, Chairman of the Conference of Colleges in Oxford, said:

> The contribution the Colleges are able to make is crucial to the University's academic success. The Colleges managed their finances well in 2004–5, though the financial challenges we face are still significant. Endowments performed particularly well in 2004–5. The Lambert review stated that Oxford and Cambridge 'play a crucial role in the economic as well as the intellectual life of the UK', but would 'need to generate significantly more money than they are likely to get from public funding in order to pay their academics a more competitive wage, to develop their research strengths, to cover their teaching costs, and to subsidise talented students where necessary.' The 2004–5 financial results show that Oxford's Colleges are responding very positively to this challenge.

The gap between the cost of education provided and the fees received by universities in the UK will continue to grow larger unless corrective action is taken urgently. The public debate in the UK about the impact of higher fees—represented as a conflict between opposing views that charging higher fees is a fairer way of securing much needed funding to universities versus the view that higher fees deter students from poorer backgrounds—is being settled by the response to the Higher Education Act, which took effect in 2006.

In addition to recurring annual deficits, demand for capital expenditure remains high. While Oxford and Cambridge have managed to remain more competitive in capital project expenditures than other cost areas on University and College levels, the level of new capital investment cannot be compared with leading US universities. In recent years, Oxford and Cambridge have been successful in garnering public funds for new capital projects. A recent report noted that during 2001 and 2002, taking into account all public and private funding for the University and the Colleges, Oxford invested around £140 million in new capital projects. Harvard University spent a total of \$410 million on 'physical renewal, new facilities and acquisitions'. Oxford's spending was nearer Berkeley's at approximately £120 million.[10]

Institutions in Oxford and Cambridge traditionally met costs with a mixture of public funding and external borrowing. They also depended largely on internal resources, often leading to depletion of reserves. Larger American universities regularly use debt to finance large construction projects. This enables them to leverage the value of the initial gift to the university while addressing the cash-flow problem. Universities with large endowments and long operating histories are usually regarded as safe investments by banks in the United States. Not only do universities secure lower rates of interest, they are able to take advantage of US tax exemption rules, throughout the typically 35-year life of the bond. Universities then invest the proceeds of their gifts at rates preferable to those they owe their bondholders. The compounding of the positive differential spread in earnings leads to enhancement of the original gift. Introduction of tax incentives could result in the replication of similar investment strategies among universities in the UK.[11] Some Colleges in Oxford and Cambridge are already resorting to debt financing with larger projects, but to what extent these institutions are in a position to leverage their initial gift is not clear.

Recent achievements of Oxford or Cambridge therefore need to be assessed against a difficult funding environment. Recurrent costs exceed revenues as the core activities of the Colleges lose money. While the 36 Colleges in Oxford may have reported a small operational surplus in 2003–4 and 2004–5, they incurred a deficit in their academic income and expenditure account. The University of Oxford registered a small operational surplus in 2003–4; University income was £493 million compared to expenditure of £491 million. Similarly, Cambridge University spent £693 million while its income for 2004–5 was £695 million.

According to the *University of Oxford, Financial Statement of the Colleges, 2003–4*, the total income of the Colleges exceeded total expenditure by

£4.5 million, up from £1 million in 2002–3; yet over one-quarter (28 per cent) of Colleges recorded a deficit for the year, including richer Colleges such as Christ Church, All Souls and Nuffield. In 2002–3, over one-third (36 per cent) of Oxford Colleges reported operational deficits, again including Colleges with the largest endowments. Over half (54 per cent) the Colleges in Cambridge that published accounts in the new SORP format for 2003–4 also recorded operational deficits; they included Colleges such as Peterhouse, Jesus, and King's.

The operational deficit for individual Colleges in Oxford and Cambridge may appear small in the context of general educational spending, but the constant need to balance accounts must have a detrimental effect on institutional ability to focus on core educational activities, let alone develop new areas of growth. Long-term underinvestment in infrastructure, lower expenditure per student, and lower academic salaries (which are one-third to a half less than at top US universities) must take its toll. While these institutions remain committed to being centres of learning, teaching, and research to stand comparison with any in the world, their aspirations need to be backed by greater resources.

A significant factor influencing overall quality of output is the difference in spending between Oxford and Cambridge and their US counterparts. In 2003–4, for example, the 36 endowed Colleges in Oxford spent a total of £206 million or an average of £5.7 million each. Christ Church spent £16.4 million while St John's expenditure was £12 million. In Cambridge, Trinity's expenditure amounted to £18 million (£5 million of which was donations); St John's spent £22 million while King's expenditure was £12.9 million in 2004. In fact, total expenditure in 2003–4 for all the universities in the UK was £16.8 billion, with an average spending of £102 million.[12] Among the biggest spenders were the University of Cambridge (£660 million or $1.2 billion) and University of Oxford (£486 million or $884 million). The University of Oxford and the 36 Colleges together spent £692 million or $1.3 billion while the University of Cambridge and the 30 Colleges spent £856 million or $1.6 billion.

This compares with Harvard University's expenditure of $2.6 billion in 2003–4 and Yale's $1.7 billion. Other state-funded academic institutions, such as the University of Tokyo, for example, with a faculty of approximately 2,800 and total student enrolment of 28,000, spent about $2 billion. Even the University of Kyoto's expenditure in 2003–4 was over $1 billion. Thus, the challenge faced by universities in the UK is their inability to access the scale of resources that other global institutions command. As academic fees have fallen in real terms, the burden on the endowment to support academic purposes has increased considerably over the years.

Table 1.11 shows the contribution of endowment income and gifts to total income.

Table 1.11. Contribution of endowment income and gifts to total income, 2004

Institution	Endowment income %	Gifts %	Total income $ b
Cambridge University	4	4	1.2
Cambridge Colleges	35	6	0.4
Collegiate Cambridge	**13**	**4**	**1.6**
Oxford University	4	7*	0.9
Oxford Colleges	34	4	0.4
Collegiate Oxford	**13**	**6**	**1.3**
Yale	31	5	1.7
Harvard	31	6	2.6

* Oxford University Press makes a substantial gift (4 per cent of income) in addition to the 3 per cent received from other sources.

Endowment income in Oxford and Cambridge contributes over a third of total income of the Colleges and plays a critical role in sustaining operations while total income from the Colleges' academic activities consists of no more than 30 per cent of income. Oxbridge Colleges currently derive the bulk of their income from non-academic sources. The two universities also derive a substantial sum from non-core operations. As government funding failed to keep pace with the rising cost of operating these world-class institutions, they have successfully diversified their sources of income via fund-raising, improved endowment asset management and other operations.

Funding comparison: Ivy League versus Oxbridge

Twenty-five years ago, the operating resources of Oxford and Cambridge matched those of the best private American universities. Today Oxford can afford to spend half of what Harvard does and Cambridge less than two-thirds. The major difference between the funding of UK undergraduates lies in the assessment of cost-based tuition fees chargeable in the United States coupled with higher levels of financial aid available to students depending on individual financial need.[13] Like others among the very top US universities, admission to Harvard today is blind to the financial circumstances of the applicant; it is based entirely on merit. Deserving candidates receive financial support. While Oxford and Cambridge also admit the best applicants, their inability to charge cost-based tuition fees to students places a greater financial handicap on them.

The funding crisis faced by the top universities in the UK therefore cannot be resolved without enabling them to access substantially greater resources than they are able to command at present. The high level of fixed costs for most Colleges in Oxford and Cambridge means that reducing the number of students will not resolve the crisis, though some Colleges are considering

Table 1.12. Sources of income: Harvard and Yale in per cent

Income source	Harvard	Yale
Endowment income	31	31
Student income	21	13
Sponsored research support	23	30
Other income	14	20
Current use gifts	6	5
Income from other investments	5	1
Total Income ($ b)	**2.6**	**1.6**

Source: Financial Report To The Board of Overseers of Harvard College, Fiscal Year 2003–4; The Yale Endowment Annual Report 2004.

altering the ratio of home to overseas students to be able to charge the higher fees payable by overseas students. The London School of Economics, for example, has shifted its mix of student intake, admitting a higher proportion of applicants from outside the EU. Non-EU students pay fees that are closer to the real cost of their education, though at levels that are still lower than charges at Ivy League institutions.

Table 1.12 summarizes the sources of revenue for Harvard and Yale. The distributions have been standardized for convenience as Yale reports its breakdown slightly differently compared with Harvard. In the fiscal year ending 2004, Yale received $1.63 billion of income, of which 31 per cent was from the endowment, 30 per cent from grants and contracts, 15 per cent from medical services, 13 per cent from net tuition, room and board, 5 per cent from current gifts, 2 per cent from publications income, 1 per cent from other investment income, and 5 per cent from other income.

If one compares the sources of income for the top educational institutions in the UK and the Unites States, it may come as a surprise that Colleges in Oxford and Cambridge (but not the Universities) derive on average a larger proportion of their annual income from the endowment. Also, the income these Colleges derive from gifts and donations does not lag significantly behind Harvard or Yale. Oxford Colleges derived 4.4 per cent of their total income from gifts and donations in 2004 compared with Yale's 5 per cent and Harvard's 6 per cent. As Oxbridge Colleges have recently turned their focus to fund-raising, the level of support they received from their benefactors is hugely encouraging. On a collegiate basis, combining the universities and the colleges, the ratios for income from the endowment and revenue derived from gifts and donations for Oxford and Cambridge look relatively reasonable.

The differences lie mainly in the combined area of student income and sponsored research support (44 per cent for Harvard and 43 per cent for Yale) and 'Other income' (see Tables 1.10 and 1.12). Academic fees and charges inclusive of research grants and contracts for Oxford Colleges are significantly

Table 1.13. Sources of income: Oxford colleges in per cent

Income source	2004	2003
Academic fees and charges*	29.4	30.0
Endowment income	34.1	34.9
Other operating income	36.5	35.1
of which:		
Residential income (from College members)	19.4	19.4
Conferences and functions	9.7	9.2
Donations and benefactions	4.4	3.5
Other income	3.1	3.0
Total income (£ m)	**210.7**	**198.0**

* Inclusive of Research Grants and Contracts.

Source: University of Oxford, Financial Statement of the Colleges, 2003–4.

lower at 30 per cent of overall income. The universities of Oxford and Cambridge, on the other hand, receive a significant proportion of such support from the government: 77 per cent for Oxford in 2003–4, and 60 per cent for Cambridge. The contribution of endowment income as a proportion of total income of the universities of Cambridge and Oxford does not bear comparison with that of their peer group institutions in the United States. The University of Oxford was able to fund just 8 per cent of its operating expenses from endowment income while Cambridge managed at half that level in 2004. Returns on investment and additions to the endowment through fund-raising historically for both institutions have been modest, though both universities are only too aware of their lack in this direction.

The sources of income for the 36 Oxford Colleges are summarized in Table 1.13.[14] Similar comparisons with Cambridge Colleges are not available.

The problem with income for Oxford and Cambridge is not just its distribution and high level of dependence on the government, but also its aggregate level. The total revenue of Oxford Colleges and the University in 2004 was $1.3 billion and that of Cambridge was $1.6 billion compared with $1.7 billion for Yale and $2.6 billion for Harvard. It has become abundantly clear that Oxford and Cambridge need to generate significantly more revenues than they are likely to receive from public sources in order to compensate their academics at a globally competitive rate, to develop and maintain world-class research capabilities, to cover teaching costs, and to attract the best brains in the world. While it could be argued that the distribution of income from various sources for Oxbridge institutions appears balanced, it is the aggregate amount of money available to these institutions that needs to be augmented.

According to an academic strategy paper, published by the University of Oxford: 'Funds raised by Oxford as a whole in 2002–3 were £58 million as compared with £262 million in Harvard and £250 million in Stanford. Allowing for cultural differences in alumni giving, Oxford's fundraising efforts still pale in comparison with those of the leading US universities, where between 40 per cent and 60 per cent of alumni give annually. The best estimate for the figure for Oxford is around 5 per cent.'[15] As both universities plan major fund-raising campaigns over the next few years, it provides an incentive to address weaknesses in the collegiate management system, be it governance arrangements, tax matters, or performance measurement.

Cambridge launched its 800th Anniversary Campaign to raise £1 billion in additional funds across collegiate Cambridge, with many gifts directed towards endowment. The establishment of an Investment Office, with an Investment Board, also represents a significant development in Cambridge University's future approach to endowment asset management. 'This Investment Board is a significant step forward for Cambridge,' said Professor Alison Richard, Vice-Chancellor of the University. 'Building the University's endowment and providing more income to support core activities are crucial elements in our overall strategy to strengthen and reconfigure the University's finances.'

To put higher education funding in perspective, according to figures published by the organization for Economic Cooperation and Development (OECD), the United States spends 2.7 per cent of its GDP on universities, compared with 1.4 per cent in Germany, 1.3 per cent in Britain, and 1.0 per cent in France. In Germany, of the amount spent on higher education, 0.1 per cent comes from the private sector. Students do not pay fees in France, Germany, and in other EU countries. In Britain, the introduction of variable fees chargeable to students remains highly controversial, and they are nowhere near covering the real cost of a student's education. From 2006–7, universities will have the power to vary the fees they charge for courses, up to a maximum of £3,000 per year; in return the universities have to promote wider participation and access.

In their 2003–4 financial statements, many Colleges in Oxford and Cambridge refer to the long-term loss of income. Public funding per undergraduate within higher education has halved in the past two decades, and current plan to increase tuition fees is unlikely to reverse that trend. In December 1998, the Colleges agreed to reduce academic fees by 21.8 per cent (in real terms) over a 10-year period beginning in 1999–2000. While Colleges have the option to charge top-up fees, these fees will not be received directly by them, as the fees will be given to the University. In the past, Colleges received income in the form of a block grant from the Local Authority. In alleviating the problems of the whole collegiate University, some benefit will inevitably accrue to the Colleges.

Another source of income reduction was the government's decision to abolish tax credit on dividends. In one College, it eroded investment income by 20 per cent.[16] Colleges and other institutions with an income-oriented investment policy were the worst affected. Starting in 1998, changes in UK tax rules on the recovery of tax credits affected all sectors of the investment world. Payments of tax credits to pension plans and companies, for example, ceased from July 1997. From April 1999, the amount recoverable by charities in respect of tax credits on ordinary dividends was reduced from 25 per cent of dividend initially to 21 per cent and eventually to zero by April 2004. This was a factor in depressing the income of several endowments, including that of the UK's largest foundation, the Wellcome Trust. Dividends from UK equities for the Trust declined from £205 million in 1997 to £119 million in 2005, declining from 66 per cent of total income to 39 per cent over that period.

While such legislation encouraged investors to move away from an income-oriented investment strategy, the reduction in cash flow put severe pressure on the level of income that these institutions received. The painful adjustments that Colleges had to make as a result of changes in legislation are stated clearly in the 'Report of the Governing Body' for the year ended 30 June 2004 of Sidney Sussex College, Cambridge:

> The operating environment remains difficult for Colleges. The phased reduction in the real value of publicly-funded undergraduate College fees, imposed by the government over a 10-year period from 1999/2000, reached its fifth year in 2003/04. The College's publicly-funded undergraduate fee was £2,850 in 2003/04, compared to the fee for students not eligible for public funding of £3,192. The consequent loss of income was of the order of £110,000 in 2003/04. Similarly, the withdrawal of Advance Corporation Tax (ACT) relief on investment income reached its penultimate year in 2003/04 and involved a loss to College's investment income of approximately £60,000 in that year. The disappearance of all ACT relief in 2005/06 will increase the loss to £75,000, which will then be on-going.
>
> . . . the doubling of College's employer's contribution to the staff pension fund, involving an additional cost of £100,000—a cost also attributable in part to the Chancellor of the Exchequer's earlier decision to withdraw ACT relief from pension funds and charities. The Governing Body is conscious that these income losses and additional costs are permanent, and that the loss associated with the undergraduate fee will worsen over the period to 2009. The College's affairs will accordingly require careful management in the years immediately ahead, in particular to avoid damaging the quality of education provided to undergraduate and graduate students at Sidney Sussex.[17]

The government will, and should, continue to be the major source of funding for universities. But increasing their flexibility to access additional funding streams is critical. To retain their status as leading universities of the world, Oxford and Cambridge, among other UK institutions, need significantly more funds, and not just from private sources. The two universities need increased public funding in addition to their ability to access resources on a global scale. They need to rebalance and strengthen their main sources of income, which includes improving investment returns on endowment while building up endowment wealth by better fund-raising and prudent spending from the endowment; at the same time lobbying government for more funding and attractive tax incentives for donors.

Professor Alison Richard emphasized the need for a greater plurality of support for funding of British universities when she stated in her annual address to the University, on 1 October 2005:

> Society provides financial support to universities through five channels: students and their families; alumni and friends; charitable foundations; industry; and Government and its agencies, administering public funds on behalf of society as a whole. This holds for most universities in most countries in the world. In addition, some universities, including this one, develop and manage significant revenues of their own, through endowments, businesses, and intellectual properties.
>
> Heavy dependence on any one of these sources brings institutional risks. A university entirely sustained by student fees would be susceptible to the faddishness of consumerism, as well as putting too much of a burden on students and their families. The demands of donors could open up a route to distortion of the academic purposes of the university. Funding from industry might invite a slide towards research dominated by a quest for results amenable to rapid commercialisation. Exclusive dependence on endowment revenues would expose the university to the roller coaster of the financial markets. And, then there's Government.[18]

Alternative methods in which university financing could be strengthened include an array of sources other than the Government, such as the ability to issue debt or adopt more economic strategies in the management of operating assets, intellectual property assets etc. All this can be achieved by giving the universities and colleges greater freedom in managing their affairs. As Dr John Hood, Oxford's Vice-Chancellor, remarked in his inaugural address with reference to Oxford: 'In essence, the cost of producing a "world-class" university and the revenue available to fund that cost are not in harmony.'[19] As that is indeed the case for Oxford, then other universities in the UK and Europe must find it more than a fair challenge in their aspiration to become world-class institutions.

Governments across Europe have sworn to do something about the parlous state of their universities, which was brought to light in a survey by Shanghai's Jiao Tong University of the world's universities. This ranking gave eight of the top 10 places to American institutions, with only Cambridge (rank 2) and Oxford (rank 10) breaking the American monopoly. In the top 11–20, the only non-American institution was Tokyo University. Imperial College and University College, London, were placed 23rd and 26th, respectively.[20] Not only does the US government spend more on education, there is a well-established tradition of individual giving to one's Alma Mater in America. Such a tradition also flourishes in Oxbridge; the bequests, gifts, pledges, donations, and legacies made to the Colleges amounted to 4 per cent of total income, similar to gifts and donations received by top American universities.

The endowment's share of total income among Oxbridge Colleges continues to rise too. It is the absolute scale of funding and support that needs to be raised.

Endowments in Oxford and Cambridge: Poised for change

There is widespread concern among Oxford and Cambridge Colleges about the question of long-term funding and the need to be more self-reliant in securing their future. Historically, the way in which these institutions were regulated and funded inevitably influenced endowment asset management. In many Colleges internal loans were and in some cases still are outstanding to the endowment. As these loans required only capital to be restored, usually free of any interest charge, the endowment served as an attractive source of borrowing, particularly when the provision of accommodation to students was a loss-making activity.

It needs to be acknowledged that Colleges have the option to spend their endowment capital if it is not permanent or specific capital, rather than merely borrow from it. The critical question is whether it is beneficial in the long-term for the Colleges to do so? The other issue, for institutions adopting a total return investment approach, is what level of annual spending is optimal, though this immediately begs the question, optimal for whom? Many of the examples cited here illustrate that decisions taken by Colleges may have been right from the institutional point of view, but were not beneficial for preserving the endowment's real value in the long-term.

In one relatively poor College, for example, the amount due to the endowment fund represented a significantly high proportion of the value of the endowment. This borrowing from the endowment was in the form of an interest-free internal loan to the College, to be repaid over 30 years. It made sense for a College with a small endowment and restricted ability to raise money cheaply to fund a major capital project in such a manner. If the College had been obliged to borrow from the endowment at the same rate of interest as it would pay for an external bank loan, albeit at a competitive rate, it may have resulted in a different outcome for the College.

The ability to borrow on an interest-free basis from the endowment made it an attractive proposition as the expected stream of income from subsidized student housing could be interpreted as advancing the objective of the College, particularly if market returns were perceived to be relatively unattractive in the short term. It can be argued therefore that assets were diverted from the endowment to fund operations to secure a better return, or a superior revenue stream. Whether that was indeed the case—that is, whether the rental flow was better than market yields—is not evident. Nor was it clear that such a decision was based on hard investment considerations. On the contrary, the endowment's investment policy in this case had to be altered from 'growth-oriented, total return' to 'income-driven.'

In the words of the College's recently appointed bursar:

> It used to be a growth fund; and at the peak of the market the College borrowed £8 million from the fund for buildings (thus transferring the investment assets into operational assets), and was left with significantly lower income. Hence, the focus of the existing fund had to be adjusted to yield greater income. The loan is non-interest bearing. The College created a sinking fund and pays back the loan from student rents. However, the income from these operational assets is not good enough. The fallacy in my mind is assuming that the income you get from the buildings is the same that you would get from the market. For example, the yield on these assets at market value is 2.4 per cent. However, the indirect costs are actually a lot higher, often resulting in a negative return. You can put £8 million in the market and have a regular running real yield of 3–4 per cent with no overhead. However, if you convert that into operational assets, then you do not get that sort of a return. It looked like a good idea at the time. But, in reality the College lost out on income. Most operational assets are not run on a commercial basis. So, we have gone from being a small rich College to a large poor College.

Borrowing from the endowment at nil rates of interest not only resulted in depletion of endowment capital, but led to changes in investment policy decisions that were not investment driven. While such practice is relatively uncommon today, such a method of financing capital expenditure was fairly common in the recent past. As a consequence, the investment policy decisions of these institutions remained secondary to operational considerations. Operational decisions dictated endowment asset allocation resulting in lower investment returns for the endowment. Long-term depletion of endowment assets must prove detrimental to achieving the long-term objectives of institutions though the endowment may have sustained the institution in the short term. Some 43 per cent of Colleges in Oxford and Cambridge, about half in Oxford compared with a third in Cambridge, indicated practices that would have resulted in endowment depletion. Taking into account the difficult funding environment in which these institutions operated, budgetary deficits were regularly financed from reserves. Such financing would seem perfectly ordinary if assets were not moved from endowments to reserves.

The majority of bursars today consider such practices as being totally unacceptable. Colleges more dependent on endowment income were more critical of practices that resulted in endowment depletion. There is no conclusive evidence that Colleges resorted to different investment strategies depending on their level of dependency on the endowment. Colleges with larger endowments, being more dependent on the endowment for their operations, were more concerned about preserving the real purchasing power of the endowment over the long term. These institutions also attached greater importance to investment decisions that were most likely to support their stated objectives. Colleges with smaller endowments and lower dependency on the endowment to fund operations typically had access to other sources of income, which may have influenced their decision to borrow from the endowment, particularly when the cost attached to such borrowing was nil. Recent amendments to the way in which the Colleges are taxed internally helped in removing incentives to deplete endowment assets.

Recognizing the need for change, notably because the mispricing of services was clearly unsustainable, the Colleges are implementing more market-oriented policies. As one bursar commented, 'We have to erode the subsidies and charge the students more. We also have to generate more income from conferences and raise more funds from alumni. The reality of the cost of doing business is being appreciated now, and we need to raise more funds in the future as a result.' Radical changes needed to be introduced to a system where the gap between the cost of education provided and the fees received has been steadily widening. According to the *University of Oxford, Financial Statement of the Colleges, 2002–3*, an entry under Review of Operations and Finance of Balliol College stated the dilemma faced by many Colleges:

> The College ran a substantial deficit during the year, due to a combination of factors. The steady decline in real terms of the undergraduate capitation fee has become increasingly damaging, as has the College's diminishing ability to reclaim Advance Corporation Tax on its UK equity income. The large fall in the stock market has reduced the amount of money that can be prudently drawn from the endowment. Furthermore, staff costs (both academic and support staff) have continued to outpace the Retail Price Index, due—in part—to the increase in National Insurance Contributions and the further rise of the employer's contribution to the Oxford University Staff Pension Scheme. The Oxford tutorial system—with all its many advantages—is of course costly. This, combined with the expense of maintaining listed buildings, puts a financial burden on colleges like Balliol that other Higher Education establishments do not bear. To counter these adverse trends, the College has agreed to put in place a substantial rise in room rents for 'Freshers' with effect from October 2004. Such a rise will ensure that rental income covers a much greater proportion of the cost of provision, so allowing more of the endowment income to be used for academic purposes and the provision of scholarships and bursaries. These changes, together with a number of economy measures, are designed to bring the College's budget back into balance over the next four years.[21]

The Report of the Governing Body of Balliol College contained a very similar entry in its financial statement for 2003–4, except the College was a year closer to balancing its budget. Several Colleges aim to break even before depreciation on their normal operations, and to build up capital and reserves over time via unrestricted donations and bequests. Sustaining that over the long term would be considered a remarkable achievement. It is worth spending a moment to get a historical perspective on the impact of the ongoing funding crisis on Oxbridge College endowments.

Accounting for endowment and operational assets

Historical rules of accounting and taxation offer some explanation for why endowments in Oxford and Cambridge today do not bear comparison to those built up by independent American universities, most of which were created significantly later but managed to build substantial endowments over the past few decades. Today, an Oxbridge College, with a relatively modest-sized endowment, could own significant property assets that do not appear in the accounts. It may be assumed that any property acquired 25 years prior to 31 July 2002 has a negligible net book value, including the main College buildings. The estimated current market value of property owned by Colleges is thus not to be found from analysing its accounts. While some Colleges have invested in developing surplus land by building up Science Parks, Conference Centres, and other such ventures, the development potential of other existing College property assets cannot be quantified.

Many Colleges own subsidiary trading companies for the management of their property investments. But these companies pay tax as other trading companies do; they also appear in the consolidated accounts. For example, The Lamb and Flag (Oxford) Ltd. is the wholly owned subsidiary of St John's College, in Oxford. This company serves as a vehicle for the trading activities of the Lamb & Flag public house in St Giles', at the heart of Oxford. St John's College applies the profits from this public house towards the financing of graduate studentships.

Endowment and other investment assets are clearly differentiated from operational assets, which in the case of Oxbridge institutions include the main buildings of Colleges that are typically Grade I listed buildings, some dating back to the fourteenth and fifteenth centuries. The Colleges take their collective responsibility for the preservation and maintenance of these buildings seriously. In addition to insuring buildings, some Colleges in the past deemed it prudent to build and maintain reserves equal to a certain percentage of the insured value of buildings. While such provisioning is no longer common, operational assets normally do not appear in the endowment. Also, historic buildings are stated at nil value in the accounts, as it is not possible for the Colleges to ascertain their original cost.

Operational assets include student accommodation, which has seen a considerable rise in investment activity over recent years. The operating income of the 36 Oxford Colleges, derived from rents and other residential charges from members and the income from conferences and other functions for the financial years ending 2004 and 2003, amounted to over one-third

(35–36 per cent) of total income. While these figures are somewhat misleading, as they do not include the costs incurred in generating that income (expenditure on residencies, catering, and conferences amounted to just over one-quarter of total expenditure during that period), they give us some measure of their contribution to College operations compared to income derived from endowment assets, which represented 34–35 per cent of total income.

A word about taxation; the Colleges are exempt charities and thus potentially not liable to pay tax to the Internal Revenue in respect of income or capital gains as long as such income and gains are applied in support of purposes which are defined as charitable by law. The subsidiary trading companies of these institutions, however, are liable to Corporation Tax. Typically profits made by these trading subsidiaries are donated to the College, which in turn distributes them as determined by its Governing Body. In addition, Colleges may be liable for contribution under the provisions of an internally regulated College Contribution scheme, which is made to fund grants and loans to Colleges on the basis of need.

The constraints that emanate from managing property are also enshrined in the University Statutes. As one bursar explained it:

> A charitable trust has a restraint on property requiring it to be applied to exclusively charitable purposes. The key concept of a permanent endowment stipulates that all property of the College be treated as such—i.e. if you sell a portion of it you have to make provisions to replenish it within a limited time—and not treat it as free money.
>
> An example of this could be if the College, for example, has a Lodging House for undergraduates, it will also have a housekeeper to look after them. Those resident housekeepers become part of the endowment. The building is leased to the housekeeper for a pittance while she collects a market-based rent from the students. So, she has a commercial contract with the College. Next door we have a Graduate House. However, as they are adults, graduates do not need housekeepers to look after them. So the College can pick up the rent directly from them; more importantly, the building is part of the operational assets. Hence it does not appear in the accounts. If the housekeeper dies, what the College could do is turn it into operational property and make it disappear from the accounts. On the other hand, you could sell some operational property and make that asset appear in the endowment as a tangible asset.

Whether an asset appeared in the accounts was determined by whether they were classified as operational or endowment. From the College's standpoint, operational assets generating tax-free revenues appeared more attractive compared with endowment assets that may not. Thus, there existed an incentive to transfer assets from the endowment to operations, particularly in an environment where Colleges saw the value of their income being eroded from all other sectors. In addition, the ability to provide student housing was no longer considered a competitive advantage for Colleges, as more and more Colleges moved to providing accommodation for all their students.

Colleges in Oxford and Cambridge typically house all their undergraduate students in College. For historical reasons, that accommodation has for many years been charged at rates significantly below both market rents and the economic rents that would be required to cover the full cost to the College of providing the accommodation. In recent years, Colleges have been taking steps to repair that position, but in ways that do not unfairly prejudice the position of the current generation of students. In competing for the best students, the richer Colleges are in a stronger position to subsidize student rents and meals. Historically, the financial returns from such activities were typically negative. In 2003 and 2004, a larger proportion of the wealthier Colleges reported a deficit in their income and expenditure account on residencies, catering, and conferences compared to Colleges with smaller endowments where fewer reported such losses, though the size of losses were not dissimilar. Thus, the size of the endowment was not the main determinant of Colleges' spending on student rents and meals.

Colleges were also able to borrow from their endowment on extremely attractive terms. In the words of the bursar of a newly founded College: 'In the 1980s, the College started acquiring properties immediately around it by borrowing from the endowment. We also raised funds by selling off a few hostels, borrowed from the bank and started building up our non-taxable assets. The College has chosen to invest in operational assets. Over a decade, the College has built a property portfolio, which does not necessarily show in the endowment assets.' There are always exceptions to prove the rule. One College in Cambridge, Pembroke, includes its student houses as part of its investment holdings; these houses were valued at £20 million at end of June 2004 and consisted of a third of its investment portfolio.

The historical status of 'operational' versus 'endowment' assets was fully utilized by Oxbridge institutions. The endowment effectively became a source of subsidizing 'our current generation of students and Fellows quite significantly,' in the words of one bursar. 'If we did not have an endowment, then our rents and charges would be three times higher and salaries would also be lower. So, before long the College would run into deficits. Academic salaries are rising by some 1–2 per cent above inflation. As our student intake is mostly at the graduate level, and we have been subsidizing our students for so long, we are bound to run into funding difficulties. In 1929, for example, in real terms students were being charged twice as much as we charge today. If we were able to do so today, we would be in a much healthier position financially.'

As a result of the ease with which assets could be transferred from the endowment to the operational side of the balance sheet, it was a practice that was widespread among Colleges. These decisions were not whimsical, but driven by a clear need to remain competitive in the field. As Colleges compete with each other in attracting the best students, having to keep up with the Joneses is a grave consideration. As one bursar in Oxford hoping to build up his College endowment explained:

> We are trying to reduce the rate of drawdown from the endowment so that we can rebuild it. What I am arguing is that we should be able to make certain economies around the place and while we also work on fundraising, we should be able to depend less on the endowment. Our drawdown used to be a lot higher—it was in some years as high as 10 per cent. What I am trying to do is restore the endowment. Although we will not get there during my lifetime, I believe the endowment needs rebuilding. The spending rate is also relative. If some colleges provide subsidised housing to their students, it does exert pressure on the other colleges to do something similar. There is still a high correlation between the wealth of the colleges and their standing in the Norrington League Table [an annual ranking of Oxford colleges in order of undergraduate performance in each year's final examinations]; the wealthier Colleges get better exam results.

The lack of independence of the endowment and the Colleges' capacity to drawdown from capital led, not infrequently, to inefficient decision-making in endowment terms. While Yale's endowment allows the University to issue debt at attractive rates and on competitive terms for its capital development programmes, Oxbridge institutions have been placed in a situation where it is expedient to borrow from the endowment at a zero rate of interest. Clarification of approaches to capital issues will undoubtedly assist in endowment preservation. Harvard, for example, is in the process of a major redevelopment to expand and improve its physical plant. For the past two decades, Harvard has employed the strategy of financing capital projects with debt, not via internal loan from its endowment.

The size of Oxford and Cambridge Colleges' endowment assets is not reflected in their stated value. The level of understatement is not known, as endowment assets have been used over the years to build or support operational assets. These loans from the endowment do not appear as an investment in the portfolio; they simply disappear from the accounts of the endowment. For example, the endowment assets of Peterhouse in Cambridge were valued at £74.8 million in 2003. This amount, according to Andrew Murison, the College bursar at that time, 'was net of capital expenditures taken out from the endowment to build and continually refurbish the Grade I listed buildings on the home site, and on the estates, over the last 40 years, which amounted to £1.0 million annually during the period of my bursarship, and probably the equivalent of some £35 m in today's terms over the past 30 years. The net amount also excludes the insured value of the buildings within the curtilage of the College, which, if included, would lift the value of the endowment above £150 million. Capital appreciation from the endowment has had to finance this expenditure without help from operating income.'

Financial well-being

Publication of financial statements of all Colleges in Oxford and the majority of Colleges in Cambridge in the recommended format from 2003–4 makes it possible to gain some insight into the accounting practices of these institutions. Among Cambridge Colleges, for example, non-endowment assets appear as 'Investment Assets' in the College accounts. Girton College included 'Antique Furniture, Works of Art, etc.' (worth £3.3 million) as part of its investment assets. Lucy Cavendish included £294,000 worth of 'Works of Art' and Sidney Sussex £177,000 worth of 'Wines and Works of Art' as investment assets. But the Keynes bequest (John Maynard Keynes, Fellow and former Bursar of King's, bequeathed works of art to the College) on loan to the Fitzwilliam Museum in Cambridge has no value put upon it in the accounts of King's College. According to one Cambridge bursar:

> We sold a First Folio of Shakespeare for £3.6 million recently. We don't count such existing assets as being part of the endowment portfolio until after they are sold. Assets such as our sports fields, for example, have development potential. But, we do not count them as part of the endowment. Nor do we include in the endowment the student housing we provide to our members. We actually provide accommodation to all our students. However, it does not feature as an endowment asset. Most of our off-campus housing, which is part of our property portfolio within the endowment, is rented out at market-based rents. The definition of our endowment assets includes property assets with debt attached. Works of art and other valuable artefacts that can be regarded as 'inalienable' are not included in the financial statements.

Downing College did not include some £8 million of investment assets, consisting of works of art and silver among other things, in its endowment account, which was worth around £22 million in 2004.[22] Most Colleges do not include in their endowment rare books, works of art, silver, and other assets, which are deemed 'inalienable'. However, these assets can be worth a tidy sum. In the case of New College, for example, they were valued at around £50 million while the functional estate of the College was worth £100 million on top of the endowment assets, which were worth £60 million at the end of July 2004, but whose value had risen to around £118 million by the end of calendar year 2004, thanks to capital infusion as a result of a land sale. These amounts do not reflect the New College Development Fund, which was worth an additional £10 million. The Colleges' and Universities' vast collections of libraries, museums, chapels, and cathedrals housing priceless works of art, literary works, historical treasures, and artefacts, for example, are protected and preserved for current and future generations for the sake of education, research, and public exhibition—in short for the public good. Accordingly such assets are typically not recorded or capitalized for financial statement purposes.

Colleges account for various property interests differently. Girton College remains the joint beneficiary of a trust that owns a number of properties in West London. When tenants vacate the properties, they are sold and the proceeds of the sales (less expenses) are divided equally between the beneficiaries. At 30 June 2004, the College's share in the remaining properties was estimated to be worth £745,000 (gross), which amount was not included in the Investment Assets of Girton.[23] Hughes Hall in Cambridge on the other hand included £800,000 from its disposal of land and buildings as income; so did Trinity Hall (£1.2 million in 2004; £0.9 million in 2003). As stated in Trinity Hall's Bursar's Report for the year ended 30 June 2004:

> This is the first year that the accounts have been prepared on the new RCCA [Recommended Cambridge College Accounts] basis being employed by the majority of Cambridge Colleges. The new format more closely resembles General Accounting Standards, and was designed to ensure greater uniformity between the Colleges. The degree of flexibility on accounting for fixed assets, principally buildings, and their depreciation allowed under the RCCA however makes this unlikely. After some debate, we have elected to include and depreciate all College buildings over 50 years down to zero value. The policy choice is to some extent an arbitrary decision, and produces an annual charge of approximately £1.4 million. Another side-effect of the new format is the inclusion of the profit on sale of land and buildings in the income and expenditure account. Over the last few years Trinity Hall has received windfall profits from the extension of the science park. These are included under the Long Term Building Fund on the Income and Expenditure Account (shown as £1,203,681). It distorts the true picture of the College's operating income and would, without the new depreciation charge, have resulted in a completely unrealistic and excessive surplus for the year. These windfall profits are all earmarked either for building the Wychfield accommodation project or invested for academic purposes. As these profits are either spent or invested over the next eighteen months our income position will regularise, the sense of luxury will be lost and our real struggle to balance income and expenditure will be increasingly revealed.[24]

Historical rules of accounting for operational and endowment assets, particularly property, may offer some explanation why College endowments today have failed to keep pace with those built up by independent American universities, most of which were established centuries later. If longevity alone accounted for the wealth of educational endowments, then the Universities of Oxford and Cambridge would be in the top quartile of the rich list of Universities worldwide.

Table 1.14. Foundation dates of colleges and size of endowment assets

Oxford	Founded	AUM	Cambridge	Founded	AUM
University	1249	67.5	Peterhouse	1284	75.5
Balliol	1263	41.3	Clare	1326	53.1
Merton	1264	96.7	Pembroke	1347	59.6
Exeter	1314	30.1	Gonville and Caius	1348	87.8
Oriel	1326	50.3	Trinity Hall	1350	65.6
The Queen's	1341	95.6	Corpus Christi	1352	52.8
New College	1379	62.1	Magdalene	1428	33.6
Lincoln	1427	37.7	King's	1441	90.1
All Souls	1438	155.8	St Catharine's	1473	27.8
Magdalen	1458	108.9	Jesus	1497	77.8

AUM = Assets Under Management (consolidated) at 2004 financial year-end in £ million.
Source: University of Oxford, Financial Statement of the Colleges, 2003–4. Cambridge University Reporter, Accounts of the Colleges 2004.

For Ivy League academic institutions in the United States, other factors such as the ability to charge higher student fees and an active donor programme, in addition to prudent spending rules and astute asset allocation policies, contributed in enabling universities to build their endowments. Gifts and donations not only expand the scope of activities supported by endowments, they also assist in maintaining and growing the real value of the endowment. David Swensen acknowledges the role of gifts to the Yale endowment's growth in these words: 'In the absence of new gifts over the past forty-eight years, Yale's endowment would likely total only about one third of today's value.'[25] While successful investment strategies and prudent spending policies play their part, continuing gift inflows constitute a major contributory factor in generating the wealth of institutions such as Yale or Harvard today. Though the older Colleges in Oxford and Cambridge are better able to attract gifts and donations from benefactors, they are not among the wealthiest today.

Table 1.14 illustrates the size of endowments in 2004 among the 10 oldest Colleges in Oxford and Cambridge.

The top 10 richest Colleges in Oxford and Cambridge today are shown in Table 1.15. The sixteenth century appears to have been a vintage era for the foundation of Oxbridge Colleges that have grown to be among its wealthiest today, followed by those established in the fifteenth and fourteenth centuries. The exception of course is Nuffield College which was founded by William Richard Morris, 1st Viscount Nuffield, under a Deed of Covenant and Trust in 1937.

Despite Oxford and Cambridge being the oldest universities in the UK, a quarter of the Colleges were founded in the twentieth century and a further 20 per cent in the nineteenth century. Sixteen per cent of Colleges were founded in the sixteenth century. These Colleges are among the richest today, and those established in the twentieth century are among the least well off in

Table 1.15. Wealthiest colleges in Cambridge and Oxford

Oxford	Founded	AUM	Cambridge	Founded	AUM
St John's	1555	210.7	Trinity	1546	649.9
Christ Church	1546	180.9	St John's	1511	232.0
All Souls	1438	155.8	King's	1441	90.1
Nuffield	1958	112.4	Gonville and Caius	1348	87.8
Magdalen	1448	108.9	Jesus	1497	77.8
Jesus	1571	99.5	Peterhouse	1284	75.5
Merton	1264	96.7	Trinity Hall	1350	65.6
The Queen's	1341	95.6	Emmanuel	1584	65.5
University	1249	67.5	Pembroke	1347	59.6
Brasenose	1509	62.3	Christ's	1505	59.4

AUM = Assets Under Management (consolidated) at 2004 financial year-end in £ million.

Source: University of Oxford, Financial Statement of the Colleges, 2003–4. Cambridge University Reporter, Accounts of the Colleges 2004.

terms of endowment assets with the exception of the all-graduate institution, Nuffield College. Older Colleges were more successful in their ability to raise funds from alumni and friends compared to their younger counterparts, and that may explain some of the disparity in assets today.

It is a combination of factors that ultimately determines the overall well-being of any higher education institution. As explained in the NACUBO report on 'Endowment Performance and Management Practices in Higher Education':

> The overall financial well being of an institution of higher education is influenced by its endowment but only in combination with other important economic and financial characteristics. A significant component related to an institution's financial health is its pricing power in terms of its ability to raise the tuition students pay to help offset increased costs of delivering quality education programs. In addition, the effectiveness of a public institution to attain sufficient state funding weighs significantly on the institution's financial health. An institution's ability to build and sustain a healthy donor base and develop new sources of revenue has become important to counter shifts in the economy and the markets as well as the trend toward declines in federal assistance of college students in real terms.[26]

Such aspects of higher education development and management are increasingly being recognized in Europe as in the UK, not to mention among Oxbridge institutions. Many Colleges have initiated plans to become more efficient by reducing subsidies and raising alternative sources of funding. The inability of academic institutions to influence their pricing power has certainly impacted on their ability to be as successful as their US counterparts. Changes in the way operational and endowment assets are taxed, thereby removing the incentive to switch funds from the endowment to operations, should also assist in endowment preservation. Recent revisions to the College Contributions Scheme, an internal system of redistribution of wealth, may, at least partly, address the disincentive to maintain or increase endowments.

The process of change has begun, albeit recently. In the 'Review of Operations and Finance' provided by New College, in the *University of Oxford, Financial Statement of the Colleges, 2002–3*, we were informed that:

> The College continues to operate in difficult conditions. The abolition of tax credit on dividend income has damaged charities such as New College in reducing investment income by some twenty per cent. At the same time, the reduction of the College Fee paid on behalf of undergraduate students represents a loss of a third of fee income over a ten-year period. Since fees had not kept pace with inflation for the previous fifteen years, the loss of a third is difficult to absorb. Where actual damage has not been inflicted by public policy, there is persisting uncertainty about public funding for higher education; the bitterly contested plans for increased tuition fees will in themselves only slightly reduce the extent to which undergraduate education is a loss-making activity.
>
> Given those circumstances, the College has pursued a three-fold policy; first, seeking additional revenue where it can be achieved without threatening its core activities; second, eliminating indiscriminate subsidies and replacing them with more carefully targeted assistance; third, building up funds through the activities of the College's Development Office.[27]

New College along with other Oxbridge Colleges moved away from their previous policy of charging subsidized rents 'towards charging economic rents' and putting a proportion of the money towards supporting students. Over the past three years, in the case of New College, 'the indiscriminate subsidy has been reduced from £300k to £90k per annum, and will be eliminated in 2004–5.' The College has also developed an active fund-raising campaign, which is carried out principally by the New College Development Fund, an independent charitable trust not controlled by the College. Like other institutions, New College receives annual donations from its Development Fund. Total resources transferred to the College from this source amounted to £1 million in 2002 and about £0.5 million in 2003.[28]

The endowment management programmes of these institutions are poised for change; the appointment of new Vice-Chancellors in both Universities has given it greater momentum. Professor Alison Richard brings to Cambridge a wealth of experience from her role as Provost of Yale, responsible for the educational policies, operating and capital budgets and long-range financial plans of this distinguished American University that also nurtured a significant endowment. Dr John Hood, with his engineering, management, and business background, has initiated a major review into endowment management and other practices within Oxford University. He is also the first person in Oxford's 900-year history to be elected to the Vice-Chancellorship from outside the University's current academic body.

The quantum of endowment assets for Oxford and Cambridge therefore does not reflect the full picture. The total assets of these institutions far exceed that of their endowments. While some Colleges may appear to be slow in implementing changes, it is worth noting there have been significant developments in their endowment management practices over recent years—in terms of establishing sensible spending policies, diversifying endowment investments into alternative assets, albeit in a small way, collective employment of consultants, and the current move to establish more centralized form of endowment management among some of these institutions.

Cambridge has amalgamated the investments of the University and related bodies to set up an Investment Office with over £1.2 billion under management. The Colleges are not part of this initiative. Cambridge University has set up a new investment board, ushering in expertise not only from the City of London but from the US endowment world, to oversee the process. Working with a team of analysts, based in an office near the Judge Business School in Cambridge, its CIO can call on the university's expertise to aid investment decisions. While a Harvard or Yale style investment company is not envisioned, the investment process is expected to be a radical departure from the practices of the past half-century.

The establishment of Oxford Investment Partners (OXIP) in 2006, a collective investment scheme, launched by five Oxford Colleges (St Catherine's, Christ Church, Balliol, St John's and New) as majority (60 per cent) shareholders in a new commercial partnership illustrates the kind of financial innovation that some of these institutions are applying. OXIP, with initial funds under management of £120 million, will operate as an independent fund management company and manage a fund dedicated to meeting certain investment objectives of endowments and charities. The fund was set up as a result of the desire of these Colleges to reorganize and diversify their endowments and source appropriate investment products and expertise. The fund will be made available to other investors with similar underlying investment objectives, and is designed to deliver real returns in excess of 5 per cent per annum over rolling five-year periods. Given current asset yields, the Manager believes that this represents a challenging target for any fund. The objective is to offer at least the same long-term returns which should be delivered by public equities, but with considerably less volatility than that experienced from exposure to public equity investment alone.

While support for this venture is currently limited, it clearly illustrates the prospects for greater pooling of resources among these institutions, leading potentially to lower management costs, less volatility of returns, enhanced flexibility when investing in alternative assets and other capacity-constrained strategies, and greater transparency for the investing institutions. Such objectives, however, can best be realized when there is greater consensus among the

Colleges and the University in determining the direction they wish to take as they move forward.

Institutions in Oxford and Cambridge may be partly responsible for their financial plight today, but the legal and regulatory environment in which they operated also conspired against them. Higher education in the UK has been government regulated and supplied largely to local students. Competition and profit were not concepts that were applied to sectors such as education, health, and other public services. With the onset of globalization and emergence of a new economic world order, that environment is changing rapidly. Even Oxford, Britain's oldest university, has to market itself aggressively overseas.

As *The Economist* described it, 'Higher education is now international in a way it has not been since the heyday of Europe's great medieval universities—and on a vastly greater scale.'[29] While private, profit-seeking institutions are a minority, all universities actively compete for talent. Attracting the best brains implies the independence to do so, and that involves financial independence. Private universities in America may have had a head start in growing their endowments and developing strategies to attract the best talent globally while publicly funded universities in Britain, if not in Europe, are waking up to the reality of globalization and competition. As the government's role in higher education declines, British universities will grow to emphasize prudent endowment management and fund-raising to meet their stated objectives.

A point worth making is that the funding of education is a complex issue as it reflects the relationship between society and universities, and the role of finance in mediating that relationship. In the United States, for example, the level of student indebtedness is significantly higher than elsewhere in the world. As American university education is considered among the best in the world, it has been expensive; but in recent decades costs have risen considerably, ahead of inflation. Thus, the burden of financing education has been borne by students and their families, with contributions from alumni and benefactors helping to maintain grants to students. By comparison, students in the UK have benefited enormously from the public funding of higher education. Student indebtedness in the UK will also increase as a result of higher fees after the Higher Education Act takes effect in 2006. But the true cost of educating a full time student in the UK will not be covered by this fee increase. Ultimately, society has to make complex choices in deciding how to pay for services such as education or health where economies of scale may not apply, nor do cost-cutting measures as with other sectors of the economy.

Conclusion

Endowments comprise funds that are regarded as being for the long term and which fundamentally underpin and sustain the operation of the College at its desired level of activity. This definition of an endowment has been undermined historically by the tendency among Colleges in Oxford and Cambridge to transfer funds freely between endowment and reserves. Removal of tax incentives to increase or decrease the endowment will therefore help in curbing such transfers, which have proven to be detrimental to the long-term value of their endowment assets. The process of reform has begun; it is hoped that going forward such practices will be recognized as essentially inefficient in securing the long-term objectives of these institutions.

If Oxford and Cambridge wish to engage successfully in their stated aim to remain among the leading universities of the world, they will require significant sums of additional capital to underpin and sustain their operations. Endowment income will undoubtedly remain a significant means of securing this goal. As their financial and operational circumstances alter, the capital requirement of these institutions will also change. Colleges will have to make individual judgements about the prudence of spending endowment assets. Some, hopefully those that anticipate new endowment inflows, may feel able to spend from old endowments (if not permanent or specific) as long as substantial amounts are not extracted for other long-term purposes. Over the past several decades Colleges in Oxford and Cambridge have spent more than they could afford by dipping into reserves, which are periodically boosted by transfer of funds from the endowment. Such a strategy can only work as long as the long-term value of the endowment is preserved. If more is taken out of the endowment than it is able to accrue through its investment or fund-raising activities, then depending on the rate of extraction the endowment is eventually bound to disappear.

If the endowments of top American universities have prospered, it is because these institutions have been successful in recouping their true cost in providing world-class education. It is not that Harvard and Yale manage without receiving funds from the federal government. They are not autonomous, self-financing operations. Their financial strength is bolstered by endowment support that is additional to, not a substitute for, federal funding. Government support has provided a valued source of stable income. A further source of stability is the operation of their endowments as independent entities, pursuing investment policies focused on preserving the long-term value of the fund while providing an acceptable level of support for current operations.

A significant factor that enhanced endowment accumulation among institutions, such as Harvard, Princeton, and Yale, is the scale of support they sought and received from non-federal, non-governmental sources. In the final analysis, it is the endowments of these universities that have long served as the financial cornerstone of their continued excellence in education and research, while active fund-raising and prudent investment helped secure the endowment in times of economic and stock market uncertainty. Endowment income distributed for operations is Harvard's and Yale's largest source of non-governmental income, constituting about a third of total income.

Though the percentage is similar in the case of Oxbridge Colleges, the problem lies in the actual amounts involved. Such a state of affairs may have arisen as a result of these institutions' inability to determine a fair value for their products and services following the British government's direct involvement in university financing since 1980. The Colleges were no longer independent entities free to run their affairs as they saw fit; no longer able to determine the rate at which they could charge for their services and products. Nor were endowment asset allocation policies considered to be independent of Colleges' overall financial and budgetary concerns. Such a concept remains alien among several institutions today.

It is worth noting that in terms of endowment assets per student, the comparison between universities with the largest endowments in the United States and UK brings into focus the striking contrast between approaches to funding higher education. Not all US universities with substantial endowments boast high endowment assets per FTE student; the range is revealing in terms of the disparity between public and independent institutions. Thus, average endowment assets per FTE students among independent institutions in the United States were some \$101,000 compared with under \$16,000 among public institutions. The overall average was just over \$40,000.[30] Among independent institutions with endowments assets worth over \$1 billion, endowment assets per FTE student rose to \$363,000.[31] These numbers keep rising for educational institutions in the United States. Today, the financial strategies of state and private universities in America are converging as state budget deficits put additional pressure on state universities to increase student fees and build endowments from gifts from alumni and friends. At the same time, individuals and their families benefiting from that education are more willing to bear a larger share of the overall cost.

While Oxford and Cambridge feature among the top 10 university endowment assets per FTE student, the differential between Oxbridge and the very top US universities is worth emphasizing. The scale of the difference between input and output could be interpreted in favour of Oxbridge institutions' ability to function efficiently despite such constraints. It could be argued further that no action is necessary currently as these universities are doing a reasonably good job without the scale of support available to their US counterparts. In reality, however, there is little room for complacency, as this comparison fails to illustrate the extent to which endowment assets per FTE student have appreciated among the top independent institutions in the United States over the past decades while the value of such assets declined among institutions in Oxford and Cambridge. The net beneficiaries have, of course, been generations of Oxbridge students that have secured a high-quality education at very attractive rates.

Analysis of the rate of wealth creation among US universities compared to wealth destruction among UK universities is not available. It would be reasonable to suggest, however, that if nothing is done urgently to reverse the funding gap faced by institutions in Oxford and Cambridge—not to mention other highly rated centres of learning in the UK—they will struggle to retain their status among the top educational institutions in the world. Oxford and Cambridge have been able to withstand such pressures in the past because, apart from the private institutions in the United States, the rest of the world, including Europe, has not fared any better. In addition, there existed sufficient scope for efficiency gains within the Oxbridge system. Going forward, such options may not be available.

As James Tobin, the Nobel prize–winning Yale economist wrote in 1974: 'The trustees of an endowed institution are the guardians of the future against the claims of the present. Their task is to preserve equity among generations.... In formal terms, the trustees are supposed to have a zero subjective rate of time preference.... Consuming endowment income so defined means in principle that the existing endowment can continue to support the same set of activities that it is now supporting.'[32] Oxbridge institutions recognize that urgent action is required. In a world where there is severe competition for funds, these institutions need to develop policies that will help them build their endowments and secure resources from both public and private sectors.

Instead of being a source of strength, it is ironic that public funding appears to have left Oxford and Cambridge without the financial resources that would equip them to be truly world-class and successfully compete in the global arena. The complex structure of the Colleges and their relationship with the University is not a model that can easily be replicated. The collegiate University system may look messy, but it guarantees diversity and experiment. The real challenge, according to the dons at Oxford and fellows at Cambridge, is not fiddling with structures, but raising enough money to enable these institutions to exert greater freedom in managing their affairs.

Total financial freedom or freedom from state funding is not universally sought by Oxbridge academics, nor is it desirable. The best academic institutions in the United States depend greatly on government funding. But securing greater independence in managing their affairs, be it endowment asset allocation, fund-raising, issuing debt, determining the cost of their products and services, will equip these institutions to compete globally on a level playing field. Guarding the universities' autonomy is vital, but as Professor Alison Richard confirms, the idea of a break from the state would be self-defeating. According to her: 'At Cambridge, we must be explicit and clear about our societal obligations, and honour them even as we use our freedom to provide the quality of education and research that keeps us among the foremost universities in the world. Financially, we must broaden and deepen the range of our funding sources and avoid heavy dependence on any one source. Government should surely be amongst these sources, administering public funds on behalf of society collectively. But the terms of our relationship with Government must change, rapidly, for Cambridge to remain in the ranks of the very best.'[33]

Until a greater level of consensus emerges between society's expectations of universities and their need for financial support and greater academic freedom, some tension is inevitable; but creative tension is also transforming. For Alison Richard, 'managing this tension better depends first on developing a greater, shared understanding of the relationship between universities and society, and of the role of finance in mediating that relationship.' The top universities' worldwide aim to provide an outstanding education to high-calibre students, selected without regard to their background; these institutions also aim to pursue scholarship and research of the highest quality, and in a world more connected than ever before to share the results of that work for the benefit of humanity. Thus, how these institutions are nurtured is vital not only in determining the success of individuals and nations, but is also critical in shaping the future of mankind.

Oxford and Cambridge currently benefit from government funding; the government will continue to be the major source of funding for universities. This should be seen as an opportunity for these institutions in setting endowment asset allocation policies as well as in leveraging the stability of their diverse sources of funding. What Oxford and Cambridge need is not to forgo income from public sources, but to increase their private income substantially. To do so they must be able to demonstrate not just their pre-eminence as academic institutions but that the endowments under their management are performing efficiently. Donors like to be assured that their gifts are well spent—either in directly supporting academic purposes of the Colleges today or in the future. To remain in the international 'super-league', Oxbridge needs the financial strength to enable it to resource all of its activities to the highest standards.

Oxbridge institutions fully recognize the need for change that will enable them to deliver their stated objectives. Between 2003, when this study was initiated, and 2006, at the time of going to press, significant developments in endowment management in both Oxford and Cambridge have taken place. We have been privileged to record this process of transformation and to document the changes in attitude and thinking of key individuals in this context. The momentum of change can be variable, since some institutions are able to move faster than others. But when the collective university juggernauts move, which we reckon will be sooner than later, it will contribute to a revolution in endowment management practices in the UK as well as in Europe.