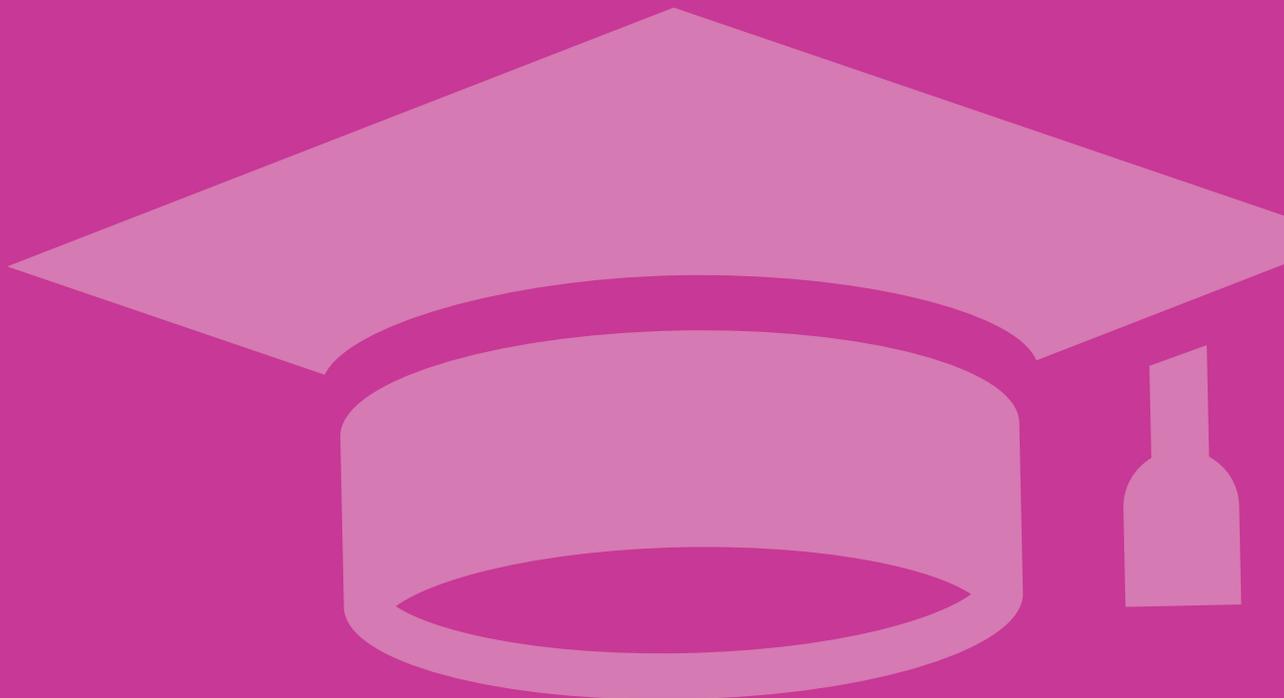


costing the curriculum

Financial sustainability in schools



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About the authors

The Association of School and College Leaders (ASCL) is Britain's leading professional body representing over 18,000 school, college and system leaders, across the UK, including primary schools, multi-academy trusts and those working across phases. ASCL works to shape national education policy, provide advice and support to members and deliver first class professional development across the sector.

CIPFA, the Chartered Institute of Public Finance and Accountancy, is the professional body for people in public finance. Our 14,000 members work throughout the public services, in national audit agencies, in major accountancy firms, and in other bodies where public money needs to be effectively and efficiently managed.

As the world's only professional accountancy body to specialise in public services, CIPFA's qualifications are the foundation for a career in public finance. We also champion high performance in public services, translating our experience and insight into clear advice and practical services. Globally, CIPFA shows the way in public finance by standing up for sound public financial management and good governance.

For further information on how ASCL or CIPFA can support you in your financial health checks see the DoH's financial health checks guidance or contact us at:

ASCL: www.ascl.org.uk/contact-us.html

CIPFA: www.cipfa.org/services/academies-hub

the issues

At a time when many government departments were experiencing funding cuts of 20% or more education, like health, received more stable settlements. In October 2015, the Institute of Fiscal Studies (IFS) reviewed the position within education spending and stated *“Current or day-to-day spending on schools grew by 3% in real terms between 2010/11 and 2014/15. Even after allowing for the growth in pupil numbers over this period, spending per pupil still rose by 0.6% in real terms.”*¹ This “nominal” increase for 5-16 year old pupil funding was at the expense of funding for 16-19 year-olds which suffered a 14% drop in real terms during the last Parliament, and funding for capital investment in education real estate which dropped by 34% in the same period.

The IFS forecasts predict an adverse position from 2014/15 for all pupil funding – their calculations illustrate that school spending per pupil is likely to fall by around 8% in real terms between 2014/15 and 2019/20. Even those schools fortunate enough to have reserves are now looking at the real prospect of managing deficit budget scenarios. Increases in National Insurance contributions, the re-introduction of pay increases after a period of pay freezes, pension contribution changes, and general inflationary pressures on a range of goods and services have all contributed to schools having to dig deep and seek to deliver efficiencies on an even greater scale than before.

With initiatives in the pipeline such as the introduction of an apprenticeship levy and the encouragement of more schools to join collaborative academy structures education faces further uncertainties in financial terms.

Schools have already absorbed an increase in pupil numbers (primary sector particularly) reflecting an increase in the national birth rate and whilst predictions vary, there is the expectation that the system will have to accommodate another 10% increase in the pupil population between now and 2024. That would be an increase in total pupil population from 7.4 million to 8.1 million.²

Concerns about teacher supply and the increasing issues schools face when trying to recruit teachers mean that in some areas salaries are being adjusted to reflect this imbalance between demand and supply.

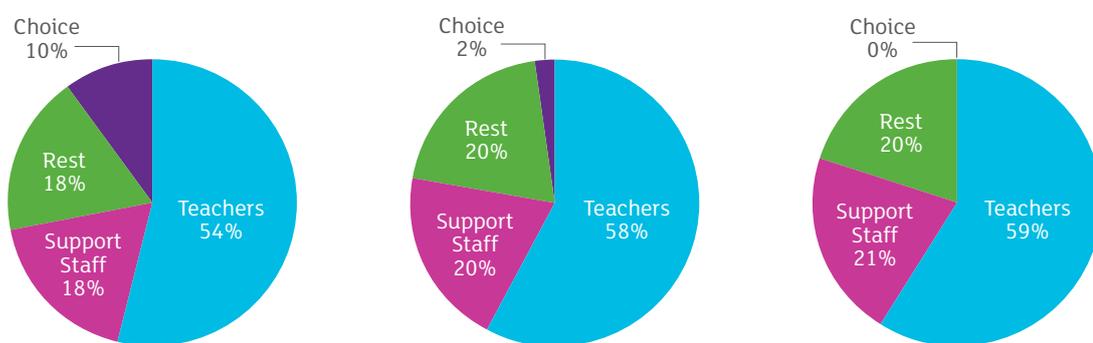
The proposed introduction of a new national funding formula was welcomed widely by school leaders eager to see years of inequality of funding per pupil rates replaced by a fairer distribution model. Plans for implementation are now delayed until 2018/19 which is disappointing for many – particularly those in the lower funded areas who hope to gain. There will inevitably be winners and losers when this is finally implemented. In the meantime, announcements made by the Secretary of State, Justine Greening, in July 2016 provided some reassurance that the current minimum funding guarantee would be retained for a further year, and that no local authority would see a reduction in the Dedicated Schools Grant, whilst previous cuts planned to the Education Services Grant would still go ahead.

1 English schools will feel the pinch over the next five years, IFS, 2015, www.ifs.org.uk/publications/8027

2 <http://schoolsweek.co.uk/the-key-points-from-the-department-for-educations-pupil-projection-figures>

There is the notion within the Department for Education (DfE) that schools can achieve greater efficiencies and there is growing expectation on school leaders to deliver these. The overwhelming drive towards a more efficient financial management concept risks diverting the focus away from the areas of a school budget where there may be the greatest potential for achieving savings, ie the curriculum. This is a contentious principle especially when many of our schools are completely driven to improve their Ofsted judgements and want to be able to deliver a creative and innovative timetable of educational provision to achieve this.

Looking at an outline summary of recent patterns of expenditure within schools over the last seven or eight years it was once possible to think in terms of a small element of the budget over which there was some choice, and where the attention was focused in achieving efficiencies. Taking into account some of the pressures listed above – the reality is that this is now being squeezed out of existence.



Schools, academies and colleges are now struggling with the dilemma which is how to deliver a balanced budget, avoid a financial deficit with the associated stigma that brings, or the prospect of a Financial Notice to Improve, and resource a curriculum which is creative, meets the students' needs and which will stand the various benchmarks set by government and improve levels of attainment.

This document looks at the current issues surrounding the financial position and the difficulties in balancing the books whilst maintaining or improving school attainment.

balancing the books v delivering results

In most schools, at least 60% of each school budget is spent on classroom delivery which means there has to be relative certainty that they have the most efficient model possible. How they do this can be open to a myriad of complications and pressures, a key one being the dichotomy of balancing the budget against increasing resources to improve attainment.

Attainment is critical to a school's survival, Ofsted judgements can make or break a school's reputation and so resources are often prioritised to ensure that attainment floors are exceeded and that improvement is maintained year on year.

It should be stressed that balancing the books and having an effective classroom structure are not mutually exclusive targets but very often compromise is limited as accountants and curriculum managers argue over what should be prioritised to balance finance against attainment.

In terms of the structure schools may need to whether they consider staff first or curriculum first, for example do you model the curriculum and then slot the existing staff into it or do you disregard the current staff, model the curriculum and then assess who is needed?

This latter model can be a paradigm shift for many – and can result in difficult decisions needing to be made for example realising that the only affordable curriculum is based on lower staffing numbers and/or higher contact ratios. Proactive planning is critical, particularly in schools that require specialist teachers since recruitment in such roles takes time. Plus, schools need to be sure that any new recruits are delivering quality teaching in the classroom. In areas where recruitment is becoming more difficult this is becoming increasingly challenging.

Schools have choices as to how they structure and operate. There is no perfect model, just a range of options, some being less palatable than others. These options largely boil down to:

- how many teachers/staff a school has or needs
- how much they teach/can teach
- how many classes a school has/needs and how many pupils are in each class.

There are educationalists³ who cite an intrinsic link between small class sizes and higher attainment, however in the world of straitened finances this can be an unaffordable ideal. Large class sizes may be financially beneficial but how does this impact on attainment? There are however those who cite teacher effectiveness as being the key to improving attainment rather than class sizes. The DfE included this within their 'class size and evidence' report⁴ and state:

³ Does small really make a difference, Valerie Wilson, University of Glasgow, www.classsizematters.org/wp-content/uploads/2012/11/107.pdf. Class Size and education in England evidence report, Department of Education, 2011, www.gov.uk/government/uploads/system/uploads/attachment_data/file/183364/DFE-RR169.pdf and Class size and student achievement, Center for Public Education, www.centerforpubliceducation.org/Main-Menu/Organizing-a-school/Class-size-and-student-achievement-At-a-glance/Class-size-and-student-achievement-Research-review.html

⁴ Class size and education in England evidence report, Department of Education, 2011, www.gov.uk/government/uploads/system/uploads/attachment_data/file/183364/DFE-RR169.pdf

“A study by Hattie (2009) found the impact of reducing class size on attainment to be smaller than the impact of other interventions. This is supported by research from Rivkin et al (2005) which finds that increasing teacher effectiveness has greater value for money than reducing class sizes, while Hanushek (2011) suggests assigning the most effective teachers to the largest classes to maximize the potential economic benefit”.

The Education Endowment Fund (EEF), which has over the last few years reviewed the cost-effectiveness of education interventions, suggests that reducing class size has only a moderate impact for a very high cost.⁵ The key issue, according to the EEF, is whether the reduction in class sizes allows practitioners to alter their classroom approach. Overall, it says, “the evidence does not show particularly large or clear effects, until class size is reduced to under 20 or even below 15”. These required reductions in size may not be achievable given the cost of an additional teacher and the funding available to the school.”

Each school will be different in terms of its financial position, pupil cohort and the needs of that cohort, therefore there is no one size fits all solution. It’s all very well doing the maths on the different options but the human side of this cannot be ignored. Large classes may have adverse impacts on not only attainment but also pupil confidence and contribution in class (how easy is it to hide in a class of 30 compared to a class of 18?). Teacher ability to control and engage large classes, particularly those who need extra support can be limited, there is also the increased pressure on the teacher, which can result adversely in terms of stress and morale. Last but not least is also the availability of appropriate physical space to house larger classes, or conversely a larger number of small classes. Most school buildings are designed to accommodate a maximum number of 30 pupils comfortably in each classroom, this may mean issues on physical health and wellbeing if trying to increase class sizes. The reduction in capital funding since 2010 may also have a consequence here, not only in terms of lack of funding for extending facilities but also in the affordability of maintaining existing buildings.

Improving teacher effectiveness may then be the key, however this often comes at a cost as the laws of economics determine that the ‘best’ attract a premium price, and so schools must weigh the financial implication of this against their budget envelope.

5 Reducing class size, Education Endowment Foundation, <https://educationendowmentfoundation.org.uk/resources/teaching-learning-toolkit/reducing-class-size>

core principles

In seeking to overcome some of the issues mentioned above its worth focusing on some core principles which might not solve the problem at a first attempt, but will certainly provide clarity about the most significant areas for a school to focus on in order to come up with realistic and workable solutions.

There is a plethora of information now available from a multitude of sources (including the DfE/ EFA) all recommending various concepts which will help schools achieve greater efficiencies and save money. Some even go so far as to suggest a range of financial targets for schools to adopt, and whilst access to such a wide range of useful information, guidance and toolkits is a good thing, selecting the right approach for an individual school can be quite confusing. School structures are evolving all the time and it's clear that there is no one-size fits all model.

We would recommend that alongside some acknowledged and more complex principles of strategic financial management, a more simplified approach might be a good starting point. This can be achieved by using some key numbers using various pieces of financial data and assembling them in a simple equation. These key numbers are:

- The average cost of a teacher (ATC)
- The amount of revenue funding per pupil (I)
- The proportion of funding available to spend on teaching staff (Pt)
- The pupil to teacher ratio (PTR)

These figures come together as follows:

$$PTR = \frac{ATC}{I \times p_T}$$

A more detailed explanation of these components is listed below:-

- **Average Teacher Cost (ATC)** – to calculate this you will need total gross salary including on costs and a note of their FTE for all those staff who can be defined as teachers (this might also include teaching assistants (TAs) who spend all their time in classroom delivery activity). Whatever costs you include they must only be in the overall equation once.

ATC = total spend on teaching salaries (possibly including those TA's or other classroom staff such as agency staff who are covering substantive posts) ÷ FTE

- **Revenue funding per pupil (I)** – NOT age weighted pupil unit only (AWPU). To calculate this include all income streams that are not designated capital and which are available to spend in this particular year – including pupil premium, and any other secure additional income the school might generate.

I = total revenue (calculated as per above) ÷ total number on roll (we recommend using September roll numbers not the autumn census and that this works best for an academic year)

- **Proportion of funding available to spend on teaching (Pt)** – calculate this by splitting total expenditure between teaching staff and all other costs. A simple example:

Total spend (available revenue) = £5,000,000

Other costs (fixed costs plus all other costs) = £2,000,000

Revenue available to spend on teachers therefore = £3,000,000

Pt = $3,000,000 \div 5,000,000 = 60\%$

Using a theoretical school we can illustrate the impact this has:

- Our theoretical school has 1,000 pupils.
- Its revenue per pupil is £4,500 and it has an average teacher cost of £45,000.
- It currently spends 60% of total budget on teaching costs.

Using the equation above this produces a PTR of 16.67

$1,000 \text{ pupil's} \div 16.67 = 59.98 \text{ FTE teachers the school can afford.}$

It is important to note that these numbers do not assume that the teacher costs or the proportion of funding to be spent on teaching staff are fixed. This is simply an equation which may be useful in identifying the current PTR and comparing it against other scenarios.

Curriculum arithmetic scenarios

Using the above formula we have produced a number of scenarios to illustrate the impact of changing dynamics on the school options. Please note figures are rounded for simplicity and ‘averages’ are assumed for PTR’s.

Our theoretical school has a balanced budget, it comprises 2,000 pupils, it has funding of £3,850 per pupil and has an average teacher cost of £45,000. It currently spends 65% of its revenue budget on teachers

The current curriculum structure gives a PTR of 1:18 (and 112 FTE teachers ie 2,000 pupils/18 pupils per teacher – at a cost of £5.040m).

$\frac{£45,000}{(£3,850 \times 65\%)}$

NB It is important to note that the above shows 18 pupils per teacher. The pupils per class would depend on the contact ratio of the teacher – and so may be higher than this. For example the average class would be 22.5 pupils if teachers spent an average of 20 out of 25 periods teaching (80% contact ratio) and the rest on management/ preparation etc. (ie $18 \text{ fte}/80\% = 22.5$). The actual size of the classes would also be likely higher than 22.5 as this value takes account of any one to one and learning support work in small groups.

Pupil teacher ratio is often used as a proxy for class size (even though these can be two different things) and is an important factor in influencing the limit of the curriculum. Why? Because size matters. Our PTR is defined by the contact time and average class size in the school. Therefore

$$\frac{ATC}{I \times p_T} = PTR = c \times ACS$$

Average class size

Contact ratio

If we assume that forecasts show that for next year the school needs to make savings and has deemed that at least £0.800m must come from the teaching budget.

If we assume a worst case scenario ie that funding has fallen to £3,250 per pupil and that teacher costs have risen to £50,000 – and we still work on spend of 65% of our funding on teachers, this results in the requirement for a higher PTR OF 1:24 (and 84 FTE teachers at a cost of £4.200m) saving us £0.840m on teacher costs.

$$\frac{£50,000}{(£3,250 \times 65\%)}$$

Average class sizes based on a PTR of 1:24 and an 80% contact ratio would be 30.

The school has the option of varying the percentage of its budget that it wishes to spend on teachers. If for example, based on the above figures for ATC and funding per pupil, it wishes to maintain a PTR of 1:18 it would need to spend 85.5% of its funding on teachers – leaving very little left for remaining services in the school – and not achieving the savings target against the teaching budget. This results in 112 FTE teachers and a cost of £5.600m.

$$\frac{£50,000}{(£3,250 \times 85.5\%)}$$

The above examples are a very basic and a ‘good enough’ formula, although we realise that in practice it is not quite this simplistic as PTR’s will vary between schools depending on targets, behaviour and additional support needed. It may however be a starting point in modelling the affordability of your curriculum.

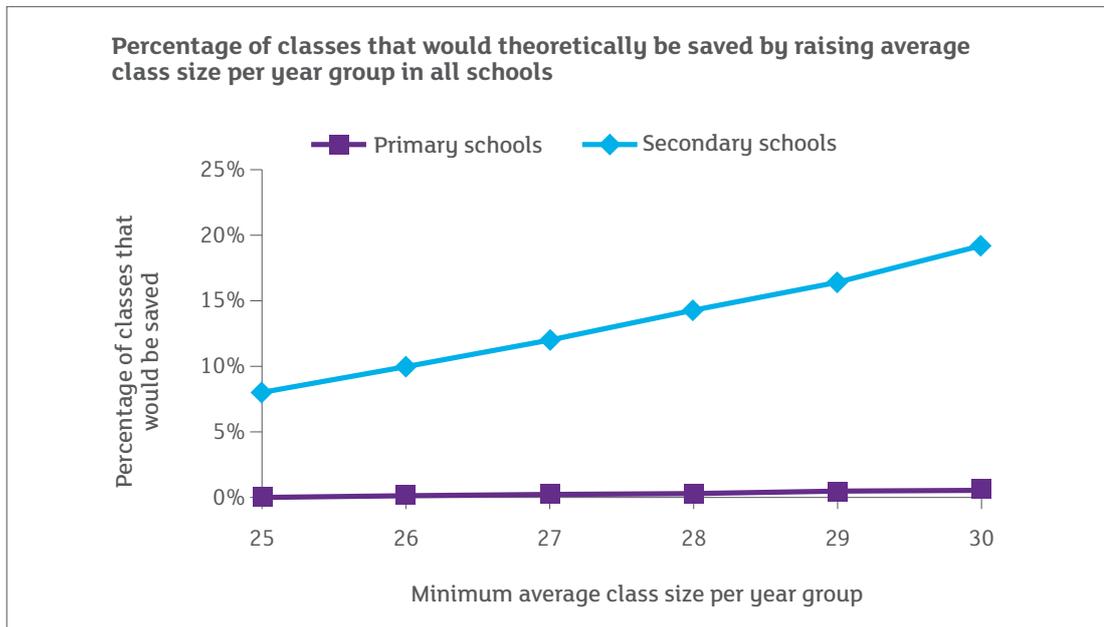
There are of course optimum limits to class sizes and contact ratios – based on capacity in terms of physical space and workload pressures/capacity. Whilst high contact ratios and larger class sizes may work well in financial terms, and can also work well for short periods, the long-term qualitative impact could be negative and should not be underestimated.

It should be noted that we do not advocate a specific benchmark for contact ratios and class sizes as the dynamic of each schools pupil base could render implementing a ‘standard’ a high risk strategy and have an adverse impact on student outcomes and staff workloads.

Key questions to consider

Curriculum arithmetic isn’t a new concept – there are numerous publications and guides going back many years that demonstrate the type of formula shown above. The ability to save money by having larger classes has also been well recognised over the last few years. For example in 2010 the Audit Commission published a set of value for money guides called Valuable Lessons which state *“Workforce deployment is the most important decision in schools and must be undertaken*

with economy and efficiency in mind". The chart below is taken from this publication and shows that secondary schools have greater scope to raise class sizes.



Source: Audit Commission Analysis of DfE schools census 2009

The Audit Commission briefings are from 2010 but still provide a useful source of information. They set out a number of key questions which are valid today, perhaps even more so given the financially straitened budgets schools are faced with.

These are:

For existing staff

- How well does the pattern of staff deployment follow your school’s vision and the priorities outlined in the school development plan?
- How do you ensure this happens?
- How well does the workforce deployment by subject or year group match your school’s priorities?
- How well do you understand the cost of changes to the breadth of the curriculum or class structures?
- To what extent is the current, or desired, curriculum offer affordable?
- If it is unaffordable, what options for working with other schools have you considered?

For new posts

- How well do you understand the long-term financial consequences of creating a new post?
- How does any proposed new post support the school’s vision and school development plan?
- Does the school know from which budget a new post will be funded?

forward planning

Forward budget planning is essential in a school. There are currently uncertainties around funding levels and may be other areas such as pupil numbers and additional support that are difficult to accurately forecast. However uncertainty does not mean forecasting should be avoided, in fact it should be stressed that the development of long-term financial strategies is not dependent upon the security of long-term funding.

There is however a danger that any school 'in crisis' will focus exclusively on the short term, and could lose sight of what would be more effective if a longer term approach was taken.

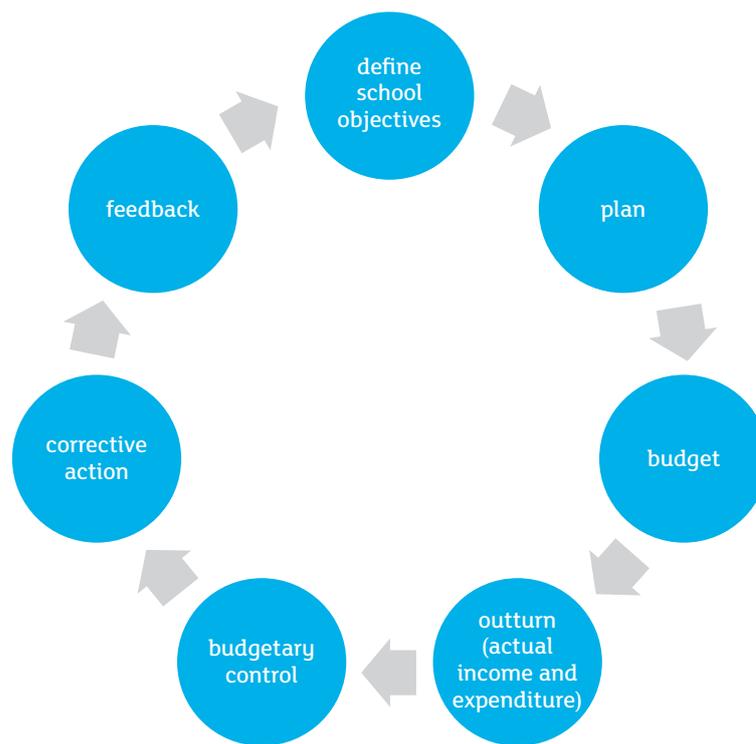
A 2012 Grant Thornton report *Towards a Tipping Point?*⁶ (Which although focused on local authorities is equally applicable to schools) stated *"the lack of certainty should increase, not reduce, the need for effective scenario planning in relation to funding and other factors such as demographics"*.

Our advice is that medium-term financial plans should follow a process:

- Establish a baseline: ie the financial position if no action is taken
- Establish key financial drivers: factors which establish the net costs to the school of delivering its functions ie staffing, overheads.
 - Demand drivers: pressure to deliver more or different services such as demographics, deprivation and attainment levels, class sizes, contact ratios, Ofsted.
 - Cost pressures: existing services become more or less expensive such as pay awards, pensions, price inflation.
- Establish (and justify) credible assumptions/forecasts of key cost drivers and their impacts on the baseline position.

The budget process, shown in the diagram below, should be a dynamic one, constantly reviewed and amended for changing circumstances. Start by looking at curriculum options/aspirations – often part of a school's objectives – and work around to the financial outcomes of those plans. Plans might not be affordable which may mean having to go round the cycle and look for compromises. The process might involve several evolutions before an agreed workable solution is achieved.

6 www.grantthornton.co.uk/en/insights/towards-a-tipping-point



Benchmarking helps schools to consider how they use their resources and encourages school leaders to make informed financial decisions. It can be a useful starting point to assess the financial position. Benchmarking involves comparing your financial and performance data with statistical neighbours, using both local authority school and academy spend data that can be found on the DfE website. In January 2016 all schools were sent the DfE’s benchmarking report cards which provided highlights of schools’ financial and performance data. Further data on the DfE’s drive towards financial efficiency can be found at: www.gov.uk/guidance/schools-financial-efficiency-financial-benchmarking

Risk management

Schools must also consider financial risk in any operational decisions. Cutting resources too far can have a negative effect not only in terms of pupil outcomes but also opening the school to the risk of fraud or financial mismanagement.

Proactive risk management in its wider context is a vital part of the leadership toolkit in any successful school. In the current climate it is imperative that schools understand and plan for a much wider context of risk, integrating this within core strategic planning and whole school improvement. Academies have to develop a risk register which incorporates all aspects of risk, such as:

- strategic and reputational risk – which might examine governance, loss of key personnel, recruitment of staff, demography, etc.
- operational risk – considering aspects of insurance, staff absence, information management and ICT infrastructure
- compliance risk – health and safety and other legislative requirements such as safeguarding, employment law, data protection.

CIPFA and ASCL would advocate that an extensive risk register is a useful tool for all schools (whether academies or not) to have which integrates with the school development plan and underpins most strategic decision making.

Accountability

Ofsted is a significant factor in the life of a school and there has been interest and debate over the years regarding its effects on schools. Schools that are told they need to improve attainment following an Ofsted inspection will often put more resources into teaching and learning. However this comes at a cost to the budget and so the school often finds itself struggling between two masters: budgetary constraints versus increased resources to improve attainment.

Schools also need to be accountable in terms of stewardship and ‘managing public money’. Governors or trustees have a strategic oversight role and need to effectively challenge their schools operations, and in order to do this they must understand the issues and the parameters. The DfE Governors handbook⁷ cites duties as including ‘*Overseeing the financial performance of the school and making sure its money is well spent*’.

There have been a number of calls to professionalise governing bodies, including Heseltine’s 2012 ‘No stone unturned’⁸ report which states:

“All boards of governors in secondary schools should include two influential local employers, at least one of whom should have good connections with the wider business community. This could be coordinated by the local chambers of commerce.”

More recently Nicky Morgan’s white paper included the controversial proposal “We will expect all governing boards to focus on seeking people with the right skills for governance, and so we will no longer require academy trusts to reserve places for elected parents on governing boards.”⁹

Many parent governors are professionals in their own industry and bring valuable wider world experience to the table, however whatever their background the fact that these individuals do this voluntarily should not be forgotten. They should be fully supported in terms of increasing their schools knowledge to understand the balancing act schools must make, and to make informed decisions taking into account their financial and educational responsibilities.

Experience has shown some governors refusing to consider increasing class sizes, or merging small year groups in such as KS1 even though the budget was in a deficit position. Their rationale is that small class sizes are preferred by parents and as a result attracts more pupils. If class sizes increased the argument is that fewer would choose to attend the school, leading to a downward spiral as funding decreases further and budget deficits worsen. This is a valuable argument, however the current deficit must be subject to a recovery plan, it cannot be allowed to grow unchecked over a number of years. The Treasury’s ‘managing public money’¹⁰ document states that ‘*remedial action*’ should be taken promptly in the case of a deficit”.

7 The DfE (2013) Governors’ Handbook, school governor roles and legal duties:

www.moderngovernor.com/answering-back-school-governors-and-accountability/#sthash.VbFFvEMh.dpuf

8 No Stone Unturned in Pursuit of Growth, Lord Heseltine, 2012, www.gov.uk/government/publications/no-stone-untuned-in-pursuit-of-growth

9 Educational Excellence Everywhere, Department of Health, www.gov.uk/government/publications/educational-excellence-everywhere

10 Managing public money, HM Treasury, 2012 www.gov.uk/government/uploads/system/uploads/attachment_data/file/454191/Managing_Public_Money_AA_v2_-jan15.pdf

Financial accountability often means making decisions which are in the best interests of the schools finances but are not ideal in terms of operations.

Financial health checks

The DfE have published a wealth of data and case studies on school financial health and efficiency.¹¹ They have also recently established a list of bodies who can support schools with financial health checks.¹² ASCL and CIPFA fully support the DfE in aiming to improve financial management and sustainability within schools, and both organisations are featured on a national basis within the supplier list. ASCL and CIPFA will also work together if schools, or the case in question would be improved by doing this.

ASCL's recently retired funding specialist Sam Ellis has been instrumental in supporting schools across England with financial sustainability. He has also worked with CIPFA in providing support to local authorities in curriculum and financial management. His financial modelling methodology has been successful in many schools and will continue to be used by ASCL and CIPFA in the financial health checks programme.

11 www.gov.uk/government/collections/schools-financial-health-and-efficiency

12 <https://www.gov.uk/government/publications/schools-financial-health-checks-supplier-directory>

summary and further reading

Schools and academy funding is unlikely to see any significant increase in the near future, however rising costs and increased pressure to improve attainment is pushing many schools to financial breaking point. It is clear that a review of curriculum delivery options and school structures are needed in many schools in order to balance the books. Schools have choices as to how they structure and operate. There is no perfect model, just a range of options, some being less palatable than others. Using the curriculum equations above will assist in appraising the options, but are not the only considerations that need taking into account. Each school will be different and forecasting is essential to ensure a proactive and considered approach is made.

There are many resources and sources of support for schools and academies around the issues highlighted above. Links to ASCL and CIPFA resources are shown below.

ASCL: Strategic Finance: design principles and financial reporting
www.ascl.org.uk/utilities/document-summary.html?id=CBED8C97-672B-4DE7-8D2B950649C46465

CIPFA Thinks articles on academy finance: www.cipfa.org/cipfa-thinks/academies



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