Methodology

Financial sustainability of fire and rescue services; and
Impact of funding reductions on fire and rescue services
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Impact of funding reductions on fire and rescue services

Report by the Comptroller and Auditor General

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Comptroller and Auditor General
National Audit Office
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Introduction

Background

Structure

1 On 4 November 2015 the National Audit Office (NAO) published two linked reports on Fire and Rescue Authority finances: Financial sustainability of fire and rescue services and Impact of funding reductions on fire and rescue services.¹ This document provides a joint methodology for the quantitative analysis contained in both reports. Details on the qualitative components of each study, such as information collected from case study fire and rescue authorities, is contained in the reports themselves.

2 Quantitative analysis in the two reports covered three main areas:

- analysis of changes in fire and rescue authority income;
- analysis of the impact of funding changes on services; and
- an assessment of the financial sustainability of fire and rescue authorities.

3 The data sources and analytical approaches for each of these areas are covered in the following sections.

4 A further technical paper relating to our analysis of variation in spending between fire and rescue authorities covered in Financial sustainability of fire and rescue services is available at: www.nao.org.uk/report/impact-of-funding-reductions-on-fire-and-rescue-services/.

Common features across all analysis undertaken

5 Details on individual pieces of analysis are set out in the subsequent sections. However, there are a number of common features shared across the analysis.

¹ Comptroller and Auditor General, Financial sustainability of fire and rescue services, Session 2015-16, HC 491, National Audit Office, November 2015; Comptroller and Auditor General, Impact of funding reductions on fire and rescue services, National Audit Office, November 2015.
Financial data

6 Common features relating to financial analysis:

- Unless otherwise stated, all financial data are presented in real terms at 2014-15 prices. We have used the GDP deflator series published by HM Treasury at the emergency budget in 2015.
- Expenditure data are presented for revenue expenditure only and focus on the General Revenue Fund Account.
- All expenditure data are outturn unless otherwise stated.

Defining fire and rescue authorities

7 By ‘fire and rescue authorities’ we mean the 46 authorities in England with fire and rescue responsibilities.

8 There are four types of authority making up the 46 fire and rescue authorities covered by this report:

- **Combined authorities (24)** – stand-alone authorities that serve combined county council and unitary authority areas.
- **Metropolitan authorities (6)** – stand-alone authorities that serve a number of metropolitan districts.
- **County authorities (15)** – where the fire and rescue service is one of a number of services provided either by a county council (11) or unitary authority (4).
- **London Fire and Emergency Planning Authority (1)** – a functional body of the Greater London Authority covering all London borough council areas.

9 We have excluded the Isles of Scilly fire and rescue authority from our analysis. The authority is unique owing to its small scale and funding arrangements. This means only 14 county authorities are included in the analysis.
Part One

Changes in income

Changes in government funding

Government funding in 2015-16

1.1 Figures for total government funding for fire and rescue authorities in 2015-16 are taken from the provisional 2015-16 settlement funding assessment published with the 2015-16 local government finance settlement.

Change in government funding

Data source

1.2 Our analysis of change in government funding draws directly on the underlying data for revenue spending power published annually by the Department for Communities and Local Government (the Department).

1.3 The Department publishes data on the components of revenue spending power, which includes council tax and government funding. For our analysis of change in government funding we retain data on government funding and exclude the council tax data.

1.4 Government funding included within revenue spending power includes:

- Settlement Funding Assessment figures, and Formula Grant figures prior to 2013-14;
- certain specific grants, including Council Tax Freeze Grant and Public Health Grant;
- New Homes Bonus;
- NHS funding for spend on social care that also benefits health; and
- revenue funding from the Better Care Fund.
1.5 Revenue spending power excludes the following types of government funding to fire and rescue authorities:

- certain specific grants where the criteria have not yet been set or where the outcome of a competitive bidding process is not yet known;
- PFI grant; and
- Capital grants.

Different types of authorities

1.6 For stand-alone authorities our analysis of government funding includes Settlement Funding Assessment figures, Formula Grant allocations and certain specific grants including Council Tax Freeze Grant. The other funding streams included in government funding are not relevant to stand-alone fire and rescue authorities.

1.7 For county authorities a broader range of funding streams is included. However, we exclude funding from Public Health Grant as this funds a new duty placed on local authorities. We also exclude funding provided by the Better Care Fund in 2015-16.

1.8 The income figures for county authorities represent the total amount available to the council as a whole rather than the amount made available to their fire and rescue services. The change figures provide a measure of the financial pressure that the council as a whole is under, and provide the context in which local decisions over fire and rescue budgets are made.

1.9 Change in government income for the London Fire and Emergency Planning Authority has been taken from the consolidated annual budget published by the Greater London Authority. These budgets identify funding streams provided by government. However, as this is a different method to that used for stand-alone and county authorities these figures are not directly comparable.

Time series

1.10 Our analysis shows real-terms change in government funding to fire and rescue authorities over the period 2010-11 to 2015-16. There have been significant changes in the way financial data are reported over this period. This means that a like-for-like comparison over time is only possible if the data are adjusted to account for these changes.

1.11 The Department addresses this by publishing annually an adjusted base year alongside the new data for that year. This means that data published by the Department are comparable over any two consecutive years. However, it is not possible to join pairs of adjusted years into a time series.
1.12 We address this by creating a chain-linked index in which pairs of adjusted years are linked by a weighting process. We use the method set out by the Office for National Statistics (ONS).¹ We have previously used this approach in our 2014 study, Financial sustainability of local authorities 2014.²

1.13 This means that the results from our time series analysis show percentage change in a weighted index. This provides a good estimate of change over the period that is not skewed by changes in duties and reporting approaches. But it cannot be used to estimate absolute change in funding. For example, our figure of a reduction in government funding of 28% for stand-alone authorities is a measure of change in the weighted index. It cannot be applied to the baseline spending power figure in 2010-11 to calculate a savings figure in cash terms.

Revenue spending power

1.14 Our analysis of revenue spending power draws on the same data sources and uses the same methods as our analysis of central government funding. However, for the spending power analysis we include the council tax data published annually alongside the government funding data in the Department’s revenue spending power figures.

Variation in reductions in spending power

1.15 Our analysis draws on our chain-linked index of change in revenue spending power for stand-alone fire and rescue authorities from 2010-11 to 2015-16.

1.16 For our measure of need we used the 2013-14 Relative Needs Formula (RNF) for fire published by the Department as part of the 2013-14 settlement. We have standardised the relative needs scores by the 2013-14 population for each authority drawn from the 2013-14 mid-year population estimates published by the ONS.

Change in the structure of funding for fire and rescue services

1.17 Analysis of change in government funding as a share of spending power from 2012-13 to 2013-14 draws on the Department’s spending power data published for the 2013-14 local government finance settlement. It uses the 2013-14 data alongside the adjusted 2012-13 data.

1.18 Spending power and government funding are defined as per the definitions in paras 1.6 and 1.14 above.

Changes in locally-raised income and reserves

Council tax

1.19 Data on the Council Tax Freeze Grant are taken from information published annually by the Department.

1.20 Estimates of change in council tax income were provided by the Department. They include an adjustment, based on the previous level of subsidy received by each authority, to address the impact of council tax support localisation in 2013-14. The change figures are shown in real terms in 2014-15 prices.

Sales, fees and charges

1.21 Sales, fees and charges income data are outturn data drawn from the Revenue Summary Expenditure statistics for local authorities, published annually by the Department as part of the Revenue Outturn data collection. We have used data from 2010-11 to 2014-15, which have been converted into 2014-15 prices.

1.22 For county authorities and the London Fire and Emergency Planning Authority, we have used sales, fees and charges figures solely from the fire and rescue service line. For stand-alone authorities we have also included sales, fees and charges income accounted for under the central services line.

1.23 Data for 2014-15 are provisional. There are two authorities where we have some questions over their returns and they have been excluded from this analysis. This is in addition to our exclusion of the Isles of Scilly.

Use of reserves

1.24 This analysis relates solely to stand-alone authorities.

1.25 Data on reserves are outturn data drawn from the Revenue Summary statistics for local authorities, published annually by the Department as part of the Revenue Outturn data collection. We have used data from 2010-11 to 2014-15, which have been converted into 2014-15 prices. In each year we take the figure for reserves held on 31 March.

1.26 Data for 2014-15 are provisional and do not contain returns from two fire and rescue authorities on reserves. These authorities have been removed from the full time series analysis. This is in addition to our exclusion of the Isles of Scilly.

1.27 For the calculation of reserves as a percentage of net revenue expenditure, we have used net revenue expenditure in 2010-11 (at 2014-15 prices) as the denominator across the time series, that is, the figures for 2014-15 are shown as a percentage of net revenue expenditure in 2010-11.
Part Two

Delivering savings

Change in spend

2.1 We have used outturn data from the Department for Communities and Local Government’s (the Department’s) Revenue Outturn Service Expenditure Summary for 2010-11 and 2014-15. We have used net current expenditure in 2014-15 prices.

2.2 For county authorities and the London Fire and Emergency Planning Authority we report net spend data solely from the fire and rescue service line. For stand-alone authorities we have also included net spend data included in the central services line.

2.3 Data for 2014-15 are provisional. We have excluded spend by two authorities as the return for 2014-15 is problematic and may include an element of misreporting.

2.4 Our analysis of expenditure in other local authority service areas and on police services is also taken from the Department’s Revenue Outturn Service Expenditure Summary for 2010-11 and 2014-15. We have used net current expenditure in 2014-15 prices.

2.5 To reflect the fact that from 2014-15 the reporting of spending on services for young people has moved from education services to children’s social care, we have moved this component of spend in the base year (2010-11) from education to children’s social care.

2.6 Owing to changes in local authorities’ responsibilities for schools with the growth of academies over this period, we have excluded education spending from our analysis of other service activities. We have also excluded spend on public health and ‘other services’.

Local variation in spend

2.7 This uses the same data as described above and involves the exclusion of two authorities (in addition to the Isles of Scilly) as set out in paragraph 2.3.

Changes in different types of spending

Staffing and running costs

2.8 Data on spending on staffing and running costs are outturn data drawn from the Revenue Summary Expenditure statistics published annually by the Department as part of the Revenue Outturn data collection. We have used data from 2010-11 to 2014-15, which have been converted into 2014-15 prices. Running and staffing costs are both reported by the Department as total rather than net spend figures.
2.9 For county authorities and the London Fire and Emergency Planning Authority we report spend data solely from the fire and rescue service line. For stand-alone authorities we have also included spend data reported in the central services line.

2.10 Data for 2014-15 are provisional. There are two fire and rescue authorities where we have some questions over their returns and they have therefore been excluded from this analysis. This is in addition to our exclusion of the Isles of Scilly.

2.11 Running and staffing costs for other local authority services and police services are also drawn from the Revenue Summary Expenditure statistics. Local authority services excludes education services, public health and ‘other services’.

The cost base for fire and rescue services

2.12 Data for fire and rescue, police services and local authority service are taken from Local government financial statistics 2012 published by the Department. Local authority services excludes education services and ‘other services’.3 The analysis uses total costs, but excludes third-party payments.

Implications for staffing appliances and stations

Workforce changes

Reducing staffing levels

2.13 Data are taken from the Fire and rescue authorities operational statistics bulletin for England, published annually by the Department.4 Staff numbers are full-time equivalents, with the exception of retained duty system firefighters, who are shown in 24-hour units of cover.

2.14 Our estimate of change in employment in the police service is taken from Public sector employment statistics 2014, published by the Office for National Statistics (ONS). It shows change in full-time equivalents across the UK from 2010 to 2014.

2.15 Our estimate of change in local authority employment shows estimated change in full-time equivalents excluding school staff from 2010 to 2013. It is taken from our 2014 report The impact of funding reductions on local authorities.5

4 Data available at: https://www.gov.uk/government/collections/fire-and-rescue-authorities-operational-statistics
5 Comptroller and Auditor General, The impact of funding reductions on local authorities, National Audit Office, November 2014.
Reducing senior management

2.16 Data are taken from the Fire and rescue authorities operational statistics bulletin for England, published by the Department. Staff numbers are full-time equivalents.

2.17 Senior managers include area, brigade and group managers.

Retained duty system

2.18 Data are taken from the Fire and rescue authorities operational statistics bulletin for England, published by the Department. Retained duty system firefighters are shown in 24-hour units of cover.

Managing job reductions

2.19 Data are taken from the Fire and rescue authorities operational statistics bulletin for England, published by the Department. Staff numbers represent headcount.

2.20 Figures for numbers ‘joining in year’ are an estimate based on the difference between total headcount at year end and numbers leaving in-year.

Stations and appliances

Stations

2.21 Data are taken from the Fire and rescue authorities operational statistics bulletin for England for 2010-11 and 2014-15 published by the Department. This draws on data provided by CIPFA.

2.22 In 2014-15, the Department started reporting numbers of mixed whole-time/retained duty stations, in addition to the number of solely whole-time and retained stations. Prior to 2014-15, mixed stations had been recorded as whole-time, but were not separately reported.

2.23 To allow for comparison over time we have included the mixed stations reported in 2014-15 along with whole-time stations for that year. This allows us to compare change in whole-time stations (including mixed stations) between 2010-11 and 2014-15.

2.24 We have excluded authorities that did not have a data return in both 2010-11 and 2014-15. This is in addition to the exclusion of the Isles of Scilly.

Appliances

2.25 Data are taken from the Fire and rescue authorities operational statistics bulletin for England for 2010-11 and 2014-15 published by the Department. This draws on data provided by CIPFA.

2.26 Data for pumps and aerials in 2010-11 and 2014-15 combines the two separate categories of pumping appliances and aerial appliances.

2.27 We have excluded authorities that did not have a data return in both 2010-11 and 2014-15. This is in addition to the exclusion of the Isles of Scilly.
Part Three

Implications for financial and service sustainability

Maintaining financial sustainability

Financial sustainability

3.1 Our analysis of use of reserves looked at change in total reserves in 2014-15 by comparing figures for 1 April 2014 with those for 31 March 2015. Data for 2014-15 are provisional and do not contain returns from two fire and rescue authorities on reserves. These authorities have been removed from the analysis. This is in addition to our exclusion of the Isles of Scilly.

3.2 Data on s114 reports and account qualifications were taken from analysis of authorities’ annual audit letters. A full set of annual audit letters for 2010-11 to 2013-14 was accessed via the Audit Commission’s archived website.

3.3 We found ISA260 annual governance returns for 27 of the 30 stand-alone authorities.\(^4\) We reviewed the annual governance returns for indications of financial stress. There is no standard format for the return but we identified a range of elements that provided potential evidence of financial stress:

- a RAG rating for areas of review related to the value-for-money audit criteria undertaken by the external auditor. An amber or red rating was used as an indicator of potential financial stress;
- whether significant risks were recognised by the external auditor under either of the two value-for-money criteria that underpin the financial audit of the authority; and
- written statements by the external auditor highlighting financial risks, particularly those related to the funding reductions, sustainability concerns or the medium-term plan.

\(^4\) We focused our analysis of annual governance returns on stand-alone authorities rather than county authorities as these report for counties cover the entire council and all its service areas.
3.4 We conducted a search of fire and rescue authorities’ websites for peer challenge reports published since 2010-11 for all types of fire and rescue authority. We found reports for 34 fire and rescue authorities. This was from a total of 43 fire and rescue authorities, due to our exclusion of the Isles of Scilly and two fire and rescue authorities undertaking peer challenges too close to our search to have had the opportunity to publish their reports. We reviewed these reports for indications of stress based on the written statements of the peer challengers, particularly focused on sustainability concerns.

**Impact on service sustainability**

Prevention and protection

3.5 Data are taken from Fire statistics monitor published by the Department for Communities and Local Government (the Department).[^5]

3.6 Data on numbers of campaign visits for the London Fire and Emergency Planning Authority are excluded as data in the years around 2010-11 are incomplete.

3.7 For our analysis of change in all indicators from 2010-11 to 2014-15 we have excluded authorities that failed to provide data in both years.

**Impacts on service outcomes**

Response times

3.8 Data on fire incident response times are taken from Fire incident response times: England published by the Department.[^6]

Numbers of fires

3.9 Data on numbers of fires are taken from Fire statistics monitor published by the Department.

Casualties

3.10 Data on casualties are taken from Fire statistics monitor published by the Department.

3.11 Case-level analysis in Figures 20 and 21 of Impact of funding reductions on fire and rescue services compares change across three 5-year time periods. However, 2-year averages are used to give time periods of:

- 2001-02 and 2002-03 to 2005-06 and 2006-07;
- 2005-06 and 2006-07 to 2009-10 and 2010-11; and

[^5]: Data available at: https://www.gov.uk/government/collections/fire-statistics-monitor
[^6]: Data available at: https://www.gov.uk/government/collections/fire-incidents-response-times
3.12 The data have been standardised by the population of each fire and rescue authority. Two-year averages from the relevant mid-year population estimates published by the Office for National Statistics have been used.

3.13 Figures 20 and 21 of Impact of funding reductions on fire and rescue services contain ‘jitter plots’ for change across the three 5-year periods set out in paragraph 3.11. The vertical axis shows change in the relevant indicator. However, the variation within each time period on the horizontal axis is purely diagrammatic and is used as a means to separate the results for each authority visually.

Personnel injuries

3.14 Data on casualties is taken from Fire and rescue authorities operational statistics bulletin for England, published by the Department.

3.15 Figure 22 in Impact of funding reductions on fire and rescue services shows change in different personnel injuries using a rolling 2-year average. This is used to smooth a spike in the data in one of the indicators in the early phases of the time series.

3.16 Figures 23 and 24 in Impact of funding reductions on fire and rescue services contain ‘jitter plots’ for change across the three 5-year periods set out in paragraph 3.11. The vertical axis shows change in the relevant indicator. However, the variation within each time period on the horizontal axis is purely diagrammatic and is used as a means to separate the results for each authority visually.

3.17 Change in numbers of personnel injured in fires over time in the jitter plots has been standardised by the number of primary fires per year, taken from Fire statistics monitor published by the Department.

Special service injuries

3.18 Data is taken from Fire statistics monitor published by the Department.

3.19 We have excluded authorities that did not have a data return in both 2010-11 and 2014-15. This is in addition to the exclusion of the Isles of Scilly.

Risk and resilience

3.20 Data on change in the number of fires in which 5 or more vehicles responded were provided by the Department and are drawn from its incident reporting system.