



Institute for
Fiscal Studies

School funding reform: an empirical analysis of options for a national funding formula

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Outline

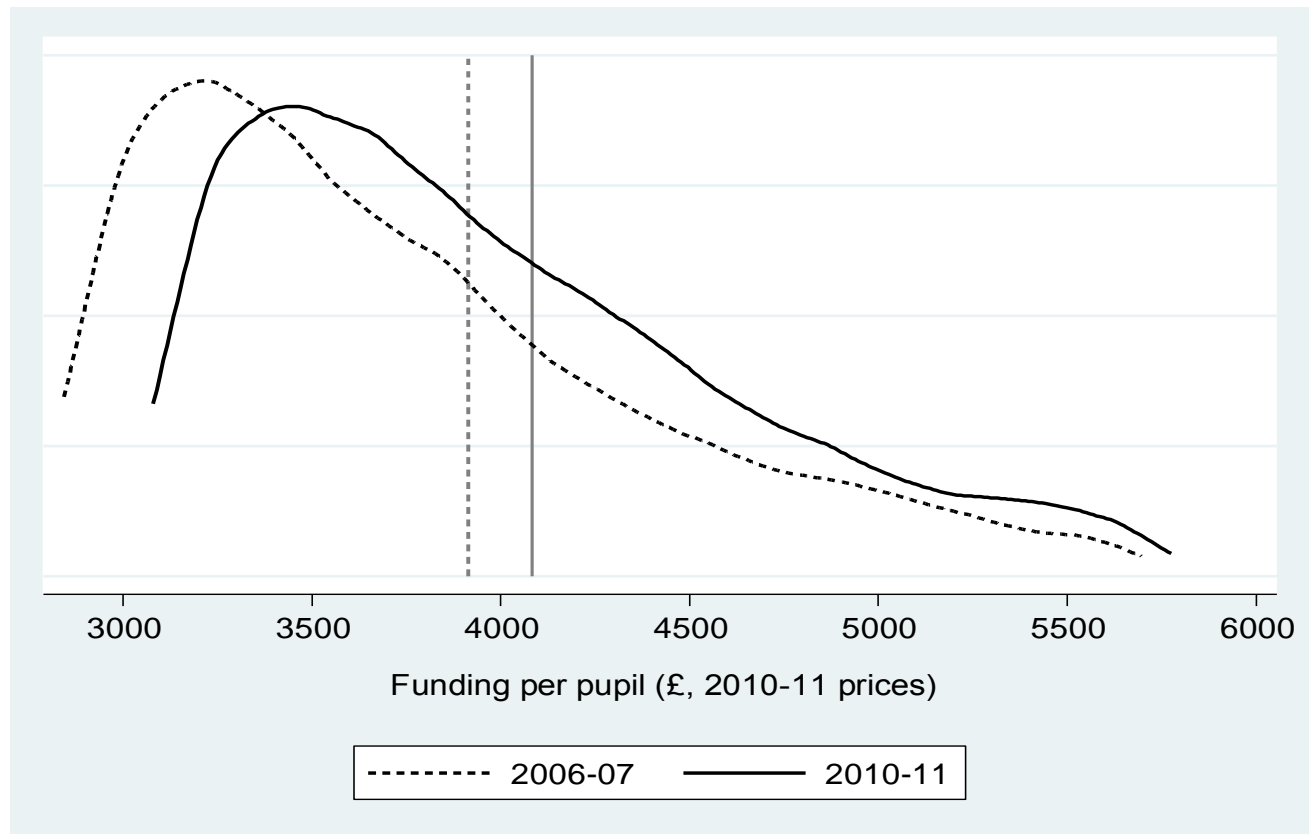
- How does the current system work and what are its implications?
- How could a national funding formula (NFF) for schools be designed?
- How would different options affect the finances of school and local authorities?
- Managing the transition
- Conclusions

The current school funding system

- Dedicated Schools Grant allocated to local authorities
- Local authorities then allocate funding to schools on the basis of ‘fair-funding’ formulae (specific grants now-streamlined)
- Most important elements of these formulae are:
 - Number of Pupils by Key Stage, Deprivation Measures , SEN, EAL, Site and School-Specific Factors
 - Local authorities do make different choices
- What are the key features of current school funding?
 - Wide variation across schools
 - ‘Progressive’ in the sense that it is focused on more deprived schools
 - Differences in funding across schools with similar characteristics
 - Funding adjusts slowly to changes in pupil characteristics
 - Dependence on historical factors

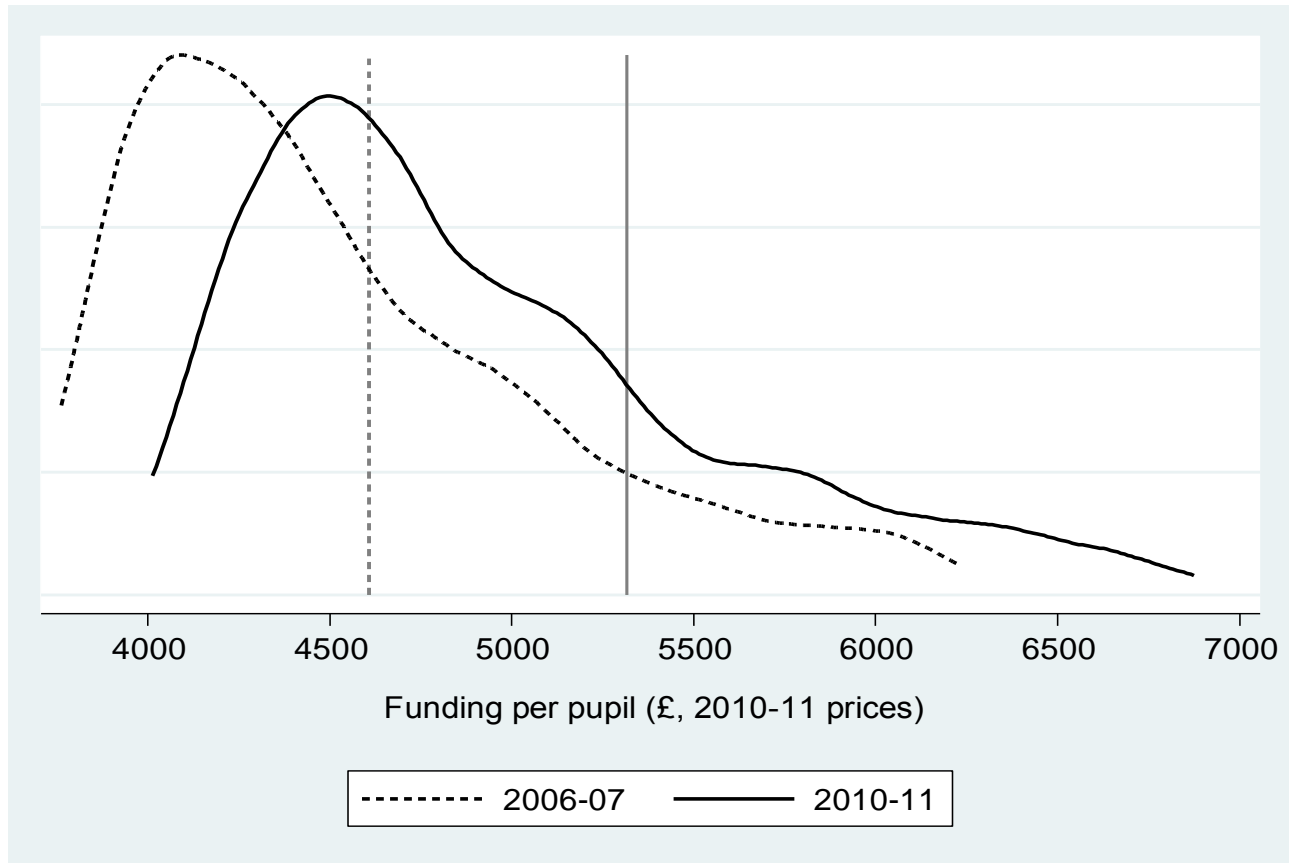
Wide variation across schools

Primary Schools

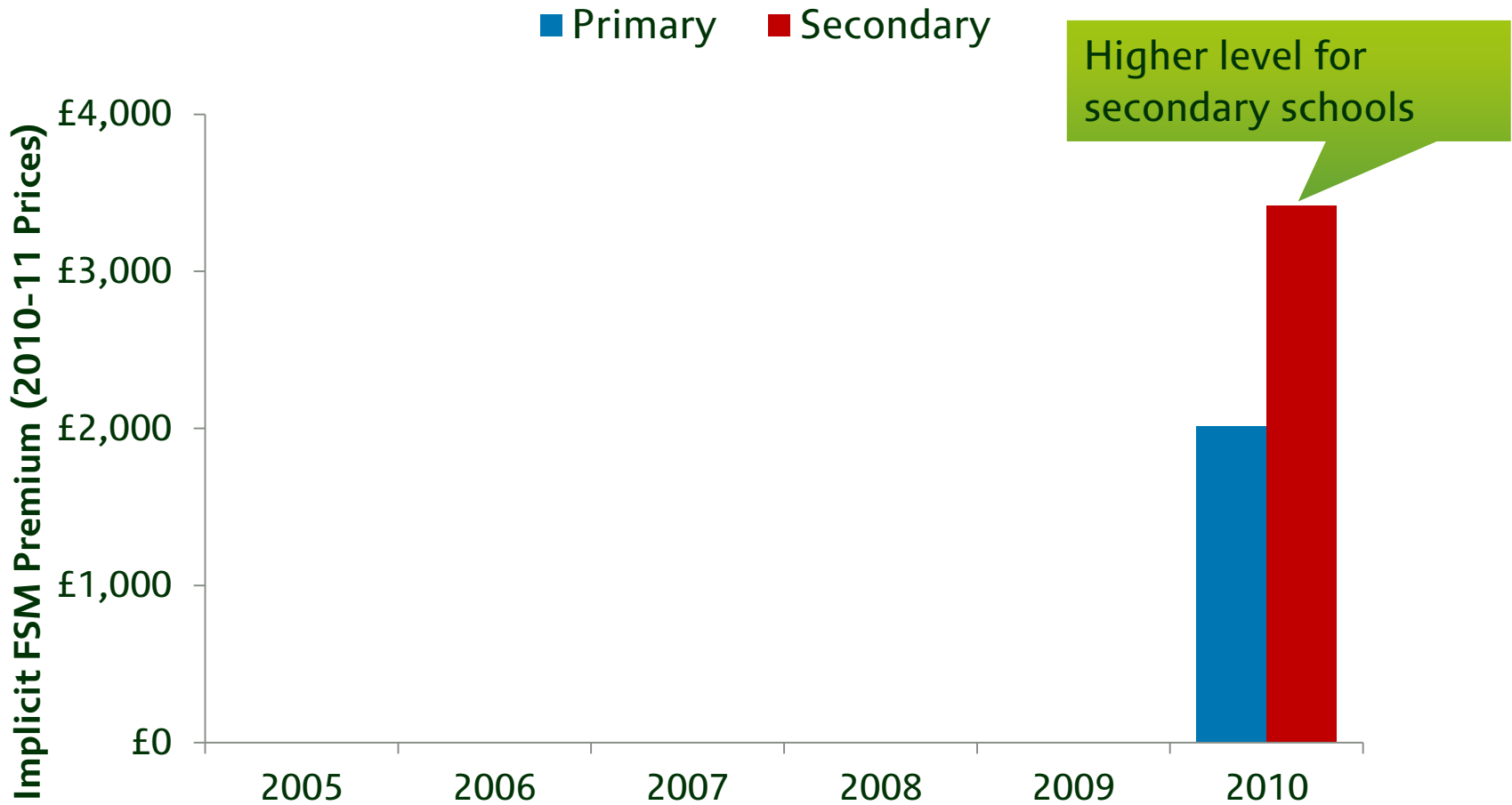


Wide variation across schools

Secondary Schools



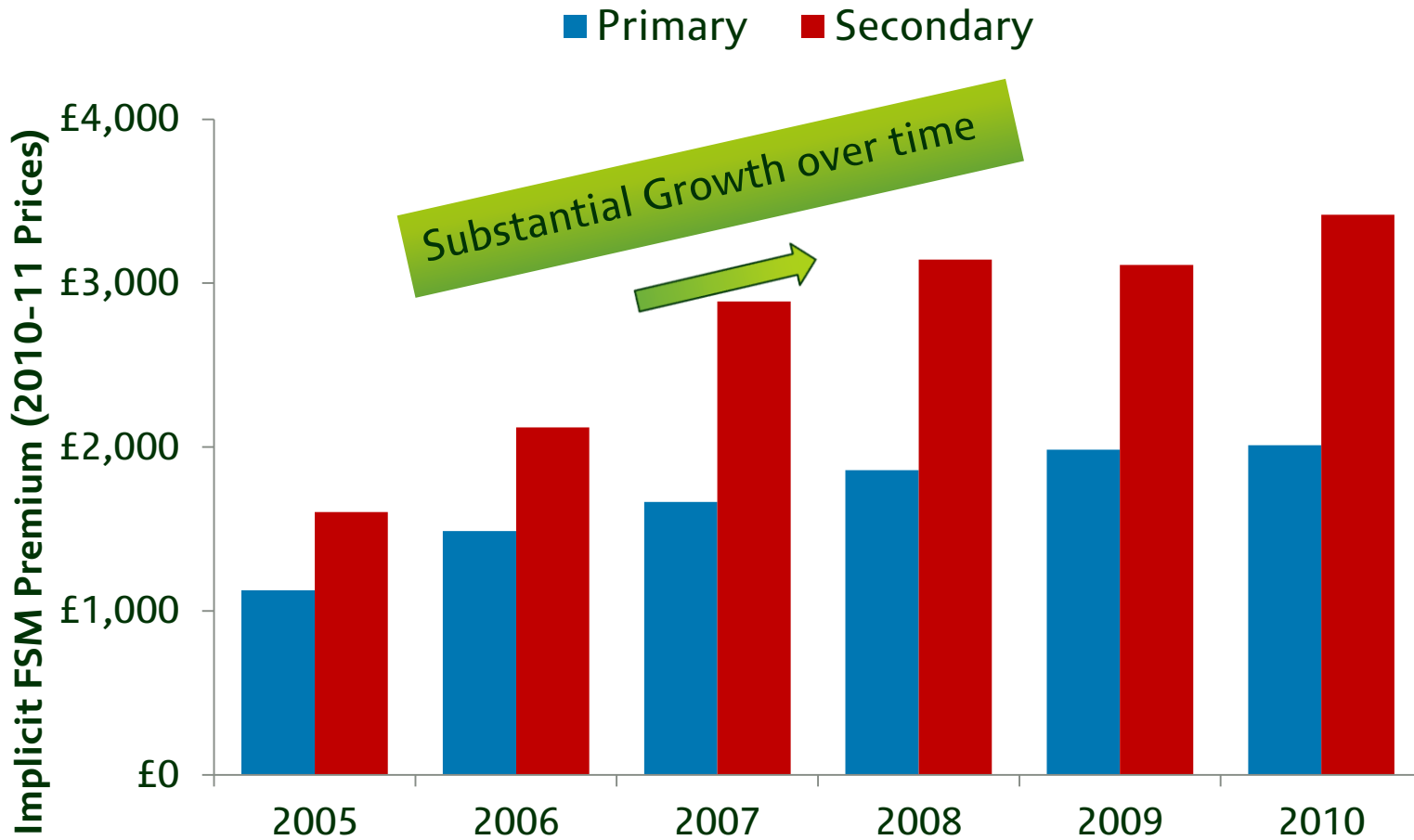
Funding focused more deprived schools



Notes: Implicit FSM Premium calculated as the extra funding associated with one extra pupil eligible for FSM, holding other pupil and school characteristics constant.

Sources: For a full list of sources please see Table 2.2 in main report.

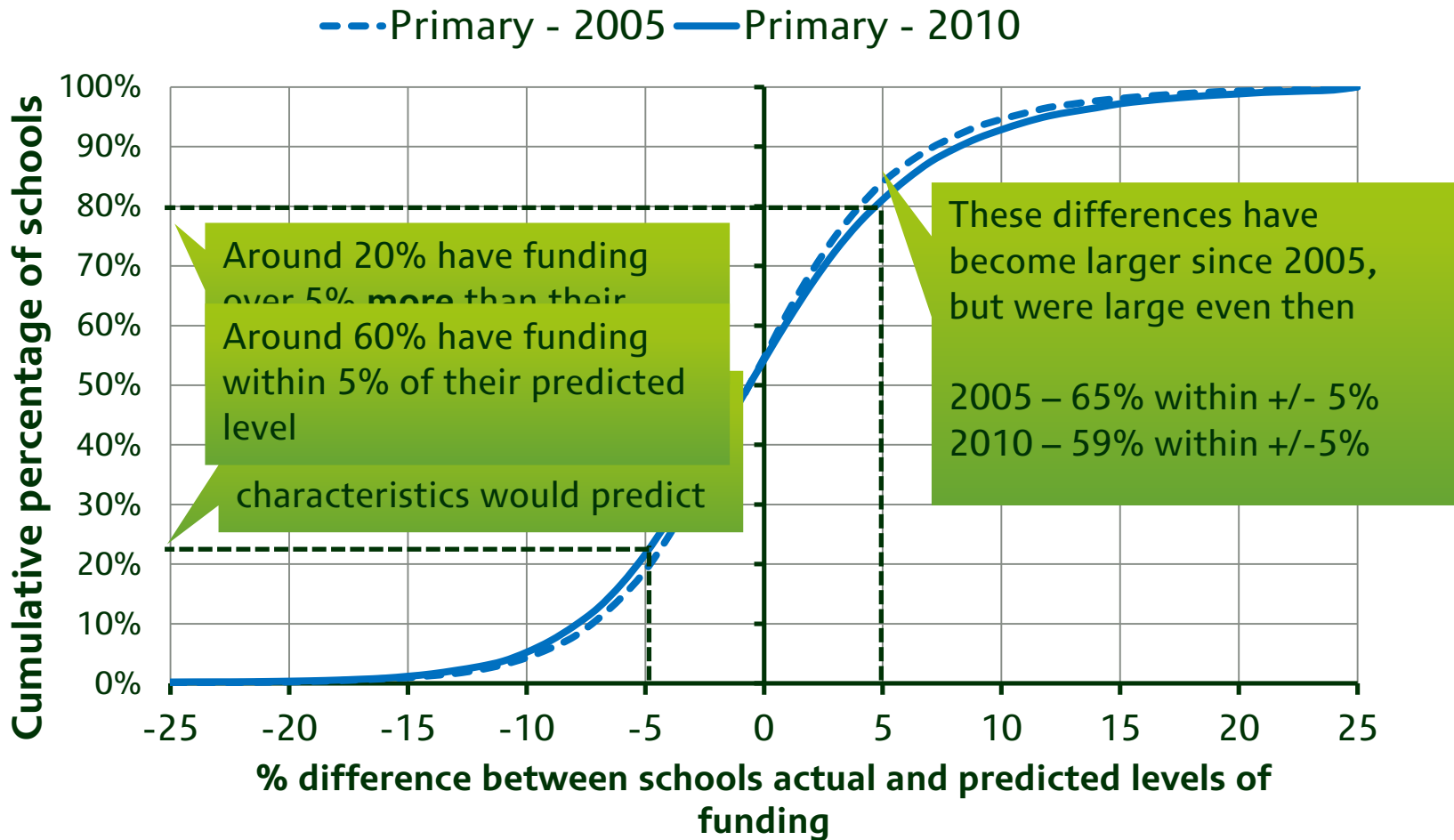
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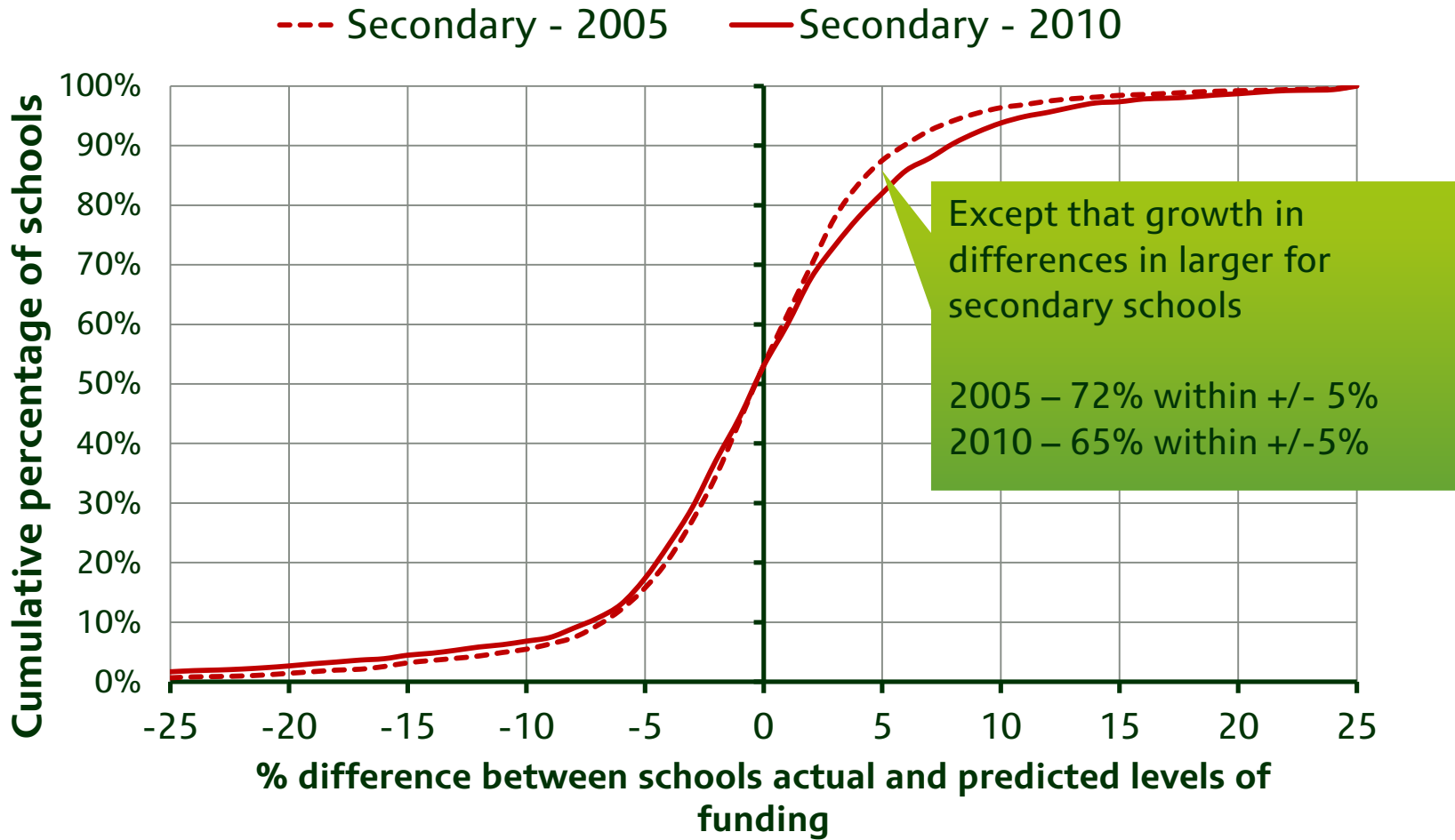
Differences in funding for schools with similar characteristics



Notes: Predicted funding refers to the level of funding predicted for individual schools based on their observable characteristics, such as numbers of pupils and their different types.

Sources: For a full list of sources please see Figure 2.4 in main report.

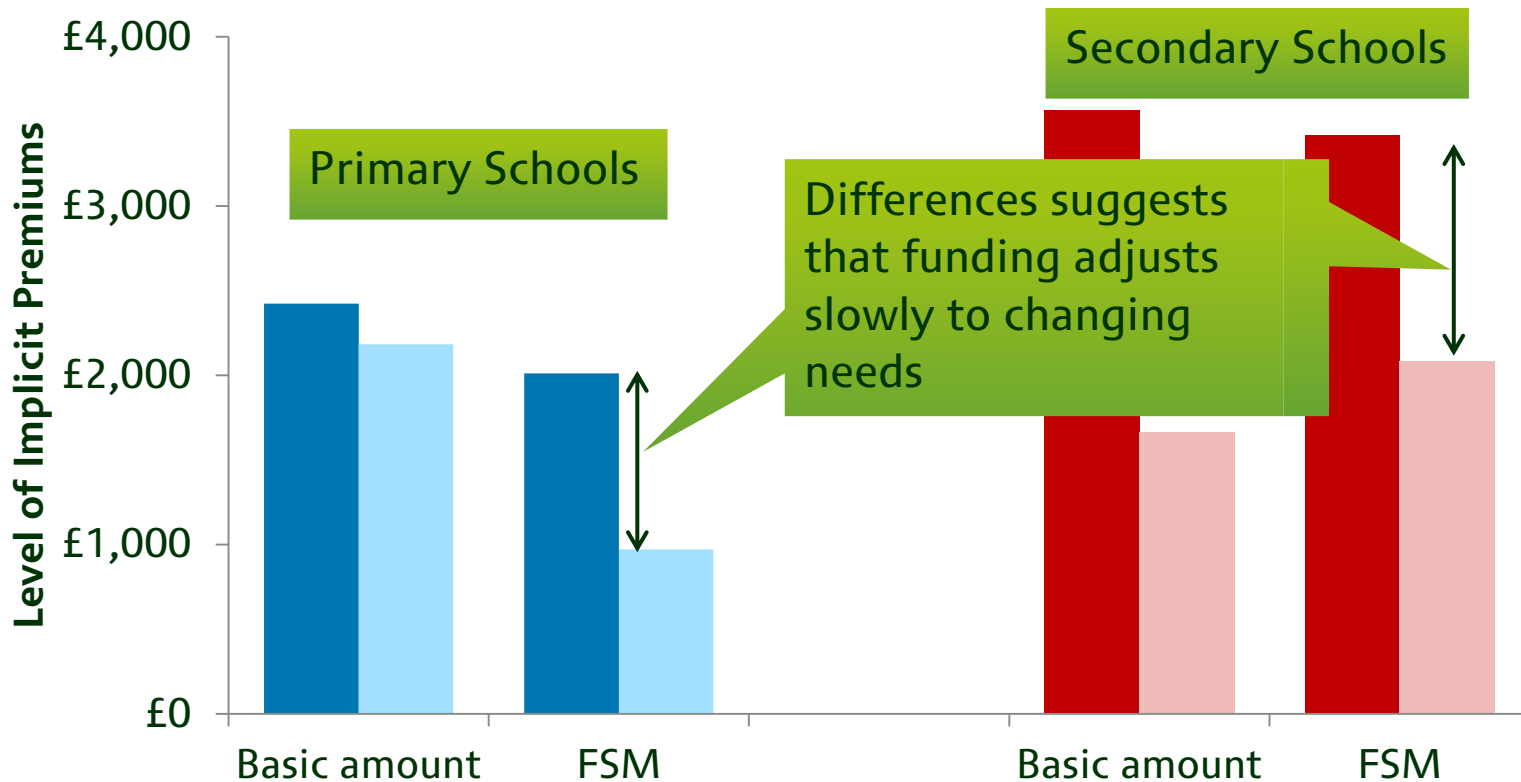
Similar story for secondary schools



Notes: Predicted funding refers to the level of funding predicted for individual schools based on their observable characteristics, such as numbers of pupils and their different types.

Sources: For a full list of sources please see Figure 2.4 in main report.

Funding adjusts relatively slowly to changes in pupil characteristics



Notes: Implicit FSM Premium and Basic Amounts calculated as the extra funding associated with one extra pupil eligible for FSM and one extra pupil, holding other pupil and school characteristics fixed.

Sources: For a full list of sources please see Figure 2.5 in main report.

The current school funding system

- Schools receive vast majority of funding from local authorities ‘fair-funding’ formulae and specific grants (now-streamlined)
- Most important elements of these formulae are:
 - Number of Pupils by Key Stage, Deprivation Measures , SEN, EAL, Site and School-Specific Factors
 - Local authorities do make different choices
- What are the key features of the current system?
 - Wide variation across schools
 - ‘Progressive’ in the sense that it is focused on more deprived schools
 - Differences in funding across schools with similar characteristics
 - Funding adjusts slowly to changes in pupil characteristics
 - Dependence on historical factors (e.g. “spend-plus”, Minimum Funding Guarantee, local authority use of historical factors)

Planned Changes to School Funding up to 2014-15

- Streamlining of specific grants into the Dedicated Schools Grant
- Cash-terms freeze in existing per-pupil funding
- Creation of a Pupil Premium
 - 2011-12: £488 per pupils eligible for free school meals and Looked After Children; £200 for Service Children
 - 2014-15: Could be worth £1,900 for pupils eligible for free school meals

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 - 2011-12: £488 per pupils eligible for free school meals and Looked After Children; £200 for Service Children
 - 2014-15: Could be worth £1,900 for pupils eligible for free school meals
- Most schools will see real-terms cuts in funding
- Most deprived schools will see small real-terms increases in funding, and less deprived schools will see real-terms cuts in funding

Current school funding system: summary

- Schools spending settlement means that most schools will see real-terms cut in funding per pupil by 2014–15
 - Only the most deprived schools will avoid this (due to pupil premium)
- Wide variation in amount of funding schools receive
 - Most of this related to their different characteristics: schools with poorer pupils are funded more generously
 - Also reflects local discretion
- But some variation is unrelated, and it has grown over time
- School funding levels responds slowly to changes in pupil needs
- Reforms have weakened link between schools' characteristics and their funding, e.g. MFG, “spend-plus”
- Overall, the system may be ripe for reform
 - Whether this reform should be a national funding formula is a separate question

Overall design of a national funding formula (NFF)

- Overall proposal for a simple, national funding formula for schools with local discretion
- School-Level Formula
 - Publish school allocations
 - Local authorities receive total across all schools in their area, but can deviate from individual school allocations (within limits)
- Local authority formula
 - Local authority level formula with limits on LA discretion
 - Largely a return to the early 2000s
- Two options should be equivalent for LAs
- Key difference is publishing some school-level default
 - LAs would need to justify deviations from this default
 - Seems a broadly sensible approach

Content of a NFF

1) Basic Amounts per Pupil

- Single, most important element of a national funding formula
- Large differences in current funding ratios and AWPUS (“Age-Weighted Pupil Units.”)
- LAs would have to maintain a secondary/primary funding ratio close to 1.27 (how big will this range be?)

2) Pupil Premium

3) Small Schools

4) Adjustment for Labour Costs

5) High-Needs Pupils

6) Central Services

7) Free Schools and Academies

Content of a NFF

- 1) Basic Amounts per Pupil
- 2) Pupil Premium
 - Individual or area-based indicators?
 - FSM or “Ever-FSM”?
- 3) Small Schools
- 4) Adjustment for Labour Costs
- 5) High-Needs Pupils
- 6) Central Services
- 7) Free Schools and Academies

Content of a NFF

- 1) Basic Amounts per Pupil
- 2) Pupil Premium
- 3) Small Schools
 - £95,000 for primary schools, zero for secondary schools
 - Combined with secondary/primary funding ratio of 1.27, this would redistribute funding from secondary to primary schools
- 4) Adjustment for Labour Costs
- 5) High-Needs Pupils
- 6) Central Services
- 7) Free Schools and Academies

Content of a NFF

- 1) Basic Amounts per Pupil
- 2) Pupil Premium
- 3) Small Schools
- 4) Adjustment for Labour Costs
 - Current adjustment for differential labour costs set in early 2000s
 - General Labour Market: adjust for average differences in wages across areas – boost to inner London, outer London and South-East
 - Combined Approach: specific costs of teachers, GLM for other staff costs – cut to inner London, East of England and South-East
 - Combined Approach makes more sense given national pay structures for teachers
- 5) High-Needs Pupils
- 6) Central Services

Content of a national funding formula

- 1) Basic Amounts per Pupil
- 2) Pupil Premium
- 3) Small Schools
- 4) Adjustment for Labour Costs
- 5) High-Needs Pupils
- 6) Central Services
- 7) Free Schools and Academies

Empirical analysis of a national funding formula (NFF)

What do we do in our empirical analysis of a NFF?

1. Quantify financial implications for schools of a NFF
 - Assume formula implemented in 2014–15
 - Calculate changes in funding that occur, relative to what schools would expect to get in funding in 2014–15 under existing policy
 - Ask how many schools win or lose under the reform
 - Repeat for various potential formulae
2. Examine the effects of a NFF at a regional and LA level
3. Consider how long the transition might take, and the measures required to smoothen it

Methodology

1. Calculate each school's 'baseline' funding
 - Expected funding per pupil in 2014–15, under existing policy
 2. Calculate each school's predicted funding in 2014–15 under a NFF
 3. Compare the two
 - Effect of moving to a NFF is judged relative to existing policy
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- Also look at combined effect of NFF and planned spending arrangements, to see how schools' budgets would change between 2010–11 and 2014–15

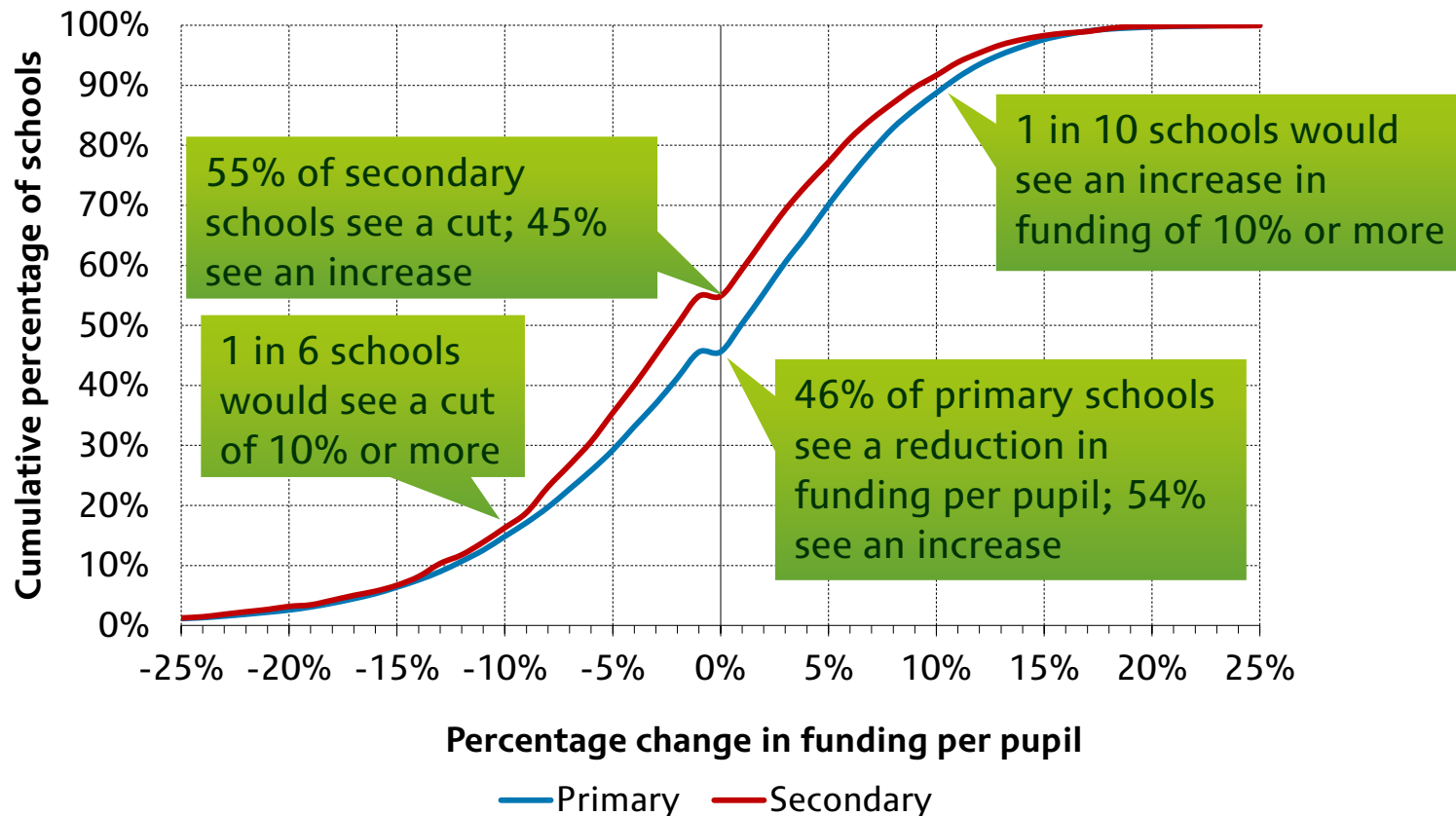
Basic option based on consultation proposals

- First option: based on suggestions in Government's consultation
 - Secondary/primary ratio = 1.27 (i.e. 27% more money provided for secondary-age pupils)
 - Lump sum for primary schools = £95,000
- Result: large redistribution from secondary to primary schools
 - 70% of primary schools better off; 79% of secondary schools worse off
 - More than 1 in 3 secondary schools would see a cut of over 10% (compared with less than 1 in 10 primary schools)
 - More than 1 in 4 primary schools gain by 10% or more (compared with 1 in 50 secondary schools)
- If this effect is unintended, then formula must be adjusted

Our 'Low Disruption' option

- To improve upon this, we tweak the formula
 - Keep the lump sum as it is
 - Increase secondary/primary ratio to 1.45 (45% more money for secondary-age pupils, instead of 27%)

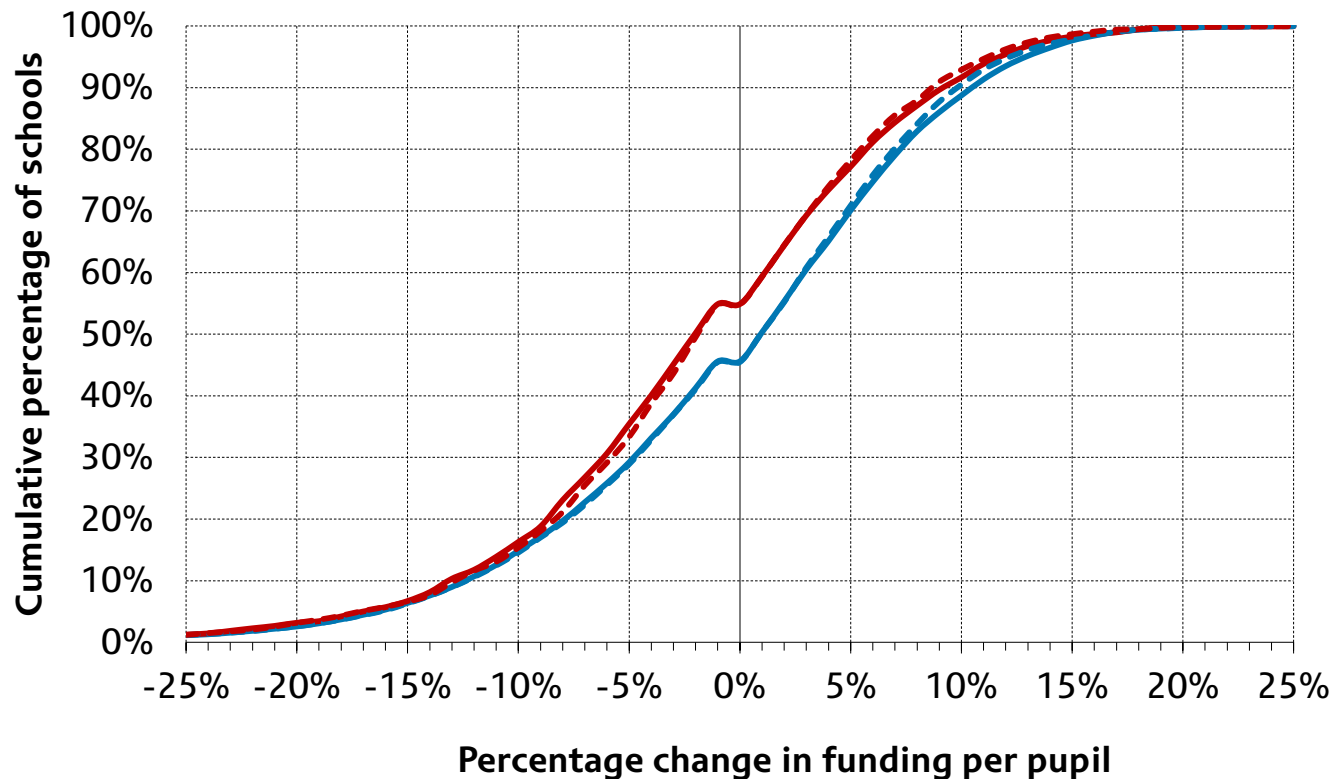
Effect of 'Low Disruption' option, relative to 2014–15 funding under existing policy



Notes: Data shown are percentage differences between predicted funding under 'Low Disruption' option and expected funding levels in 2014–15 under existing policy.

Sources: For a full list of sources please see Figure 4.2 in main report.

Effect of 'Low Disruption' option, relative to 2014–15 funding under existing policy



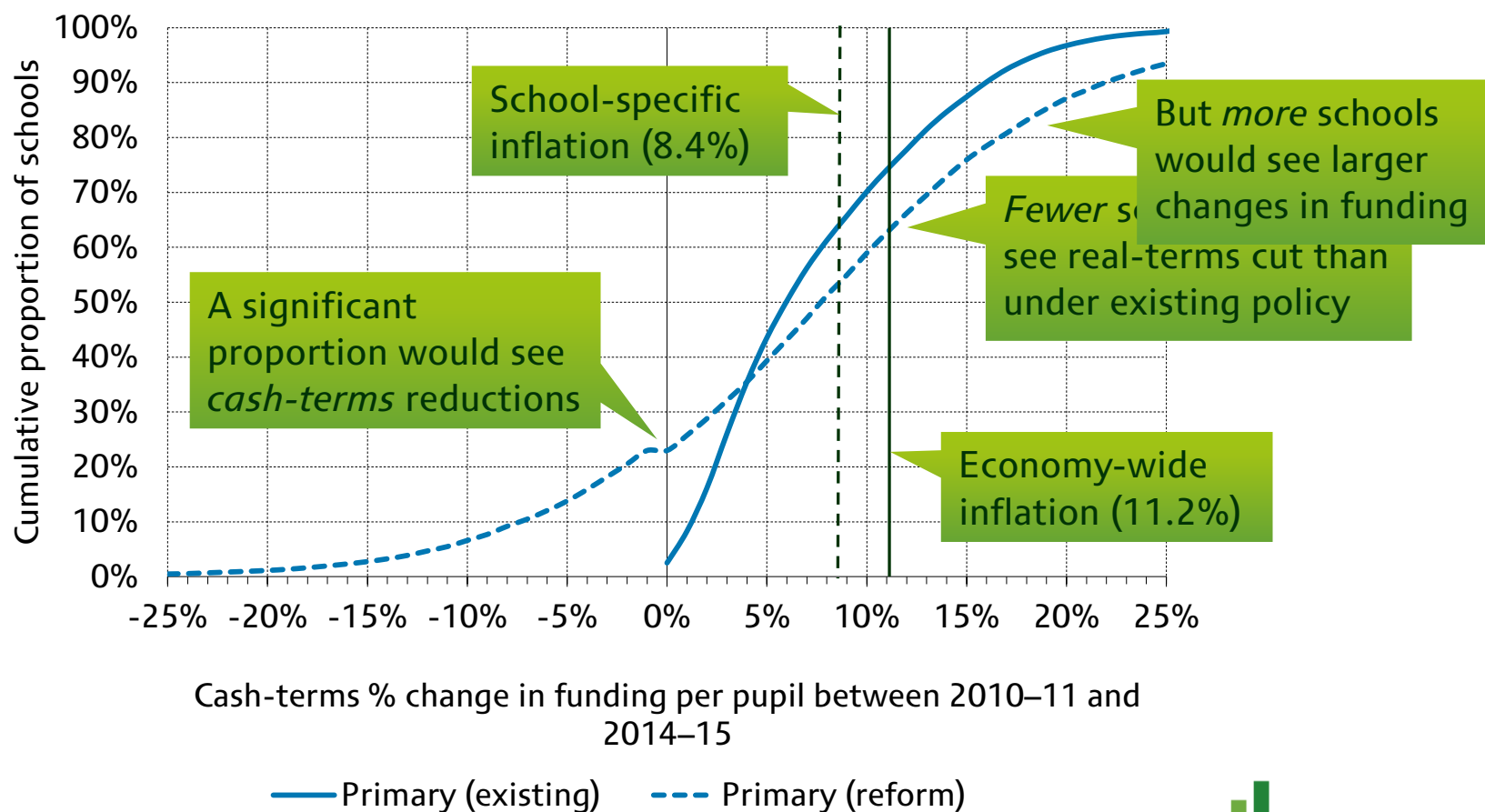
- Primary (current ACA)
- Secondary (current ACA)
- - - Primary (combined ACA)
- - - Secondary (combined ACA)

Notes: Data shown are percentage differences between predicted funding under 'Low Disruption' option and expected funding levels in 2014–15 under existing policy.

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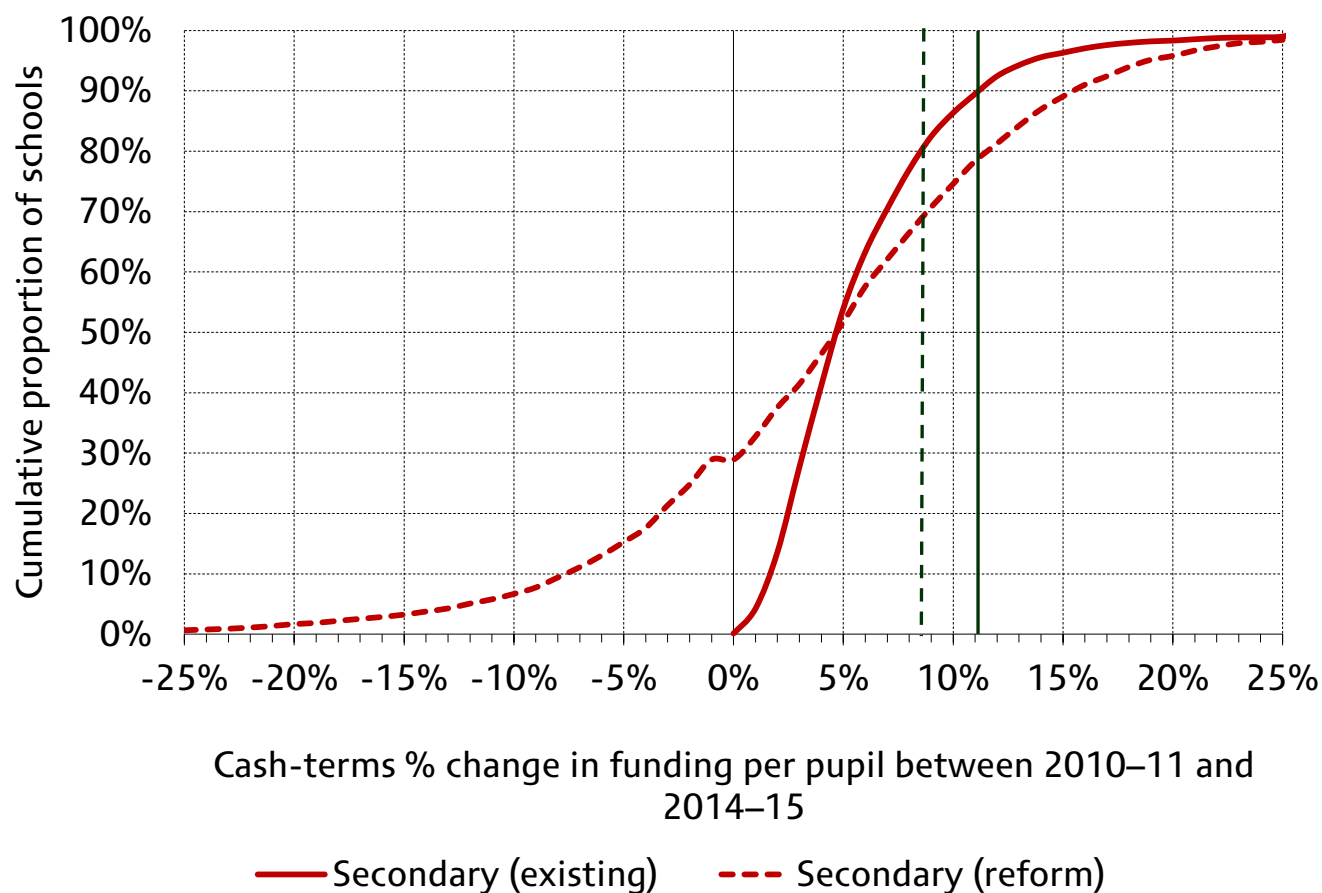
Effect of 'Low Disruption' option with combined ACA, relative to 2010–11 funding

Primary schools



Effect of 'Low Disruption' option, relative to 2014–15 funding under existing policy

Secondary schools

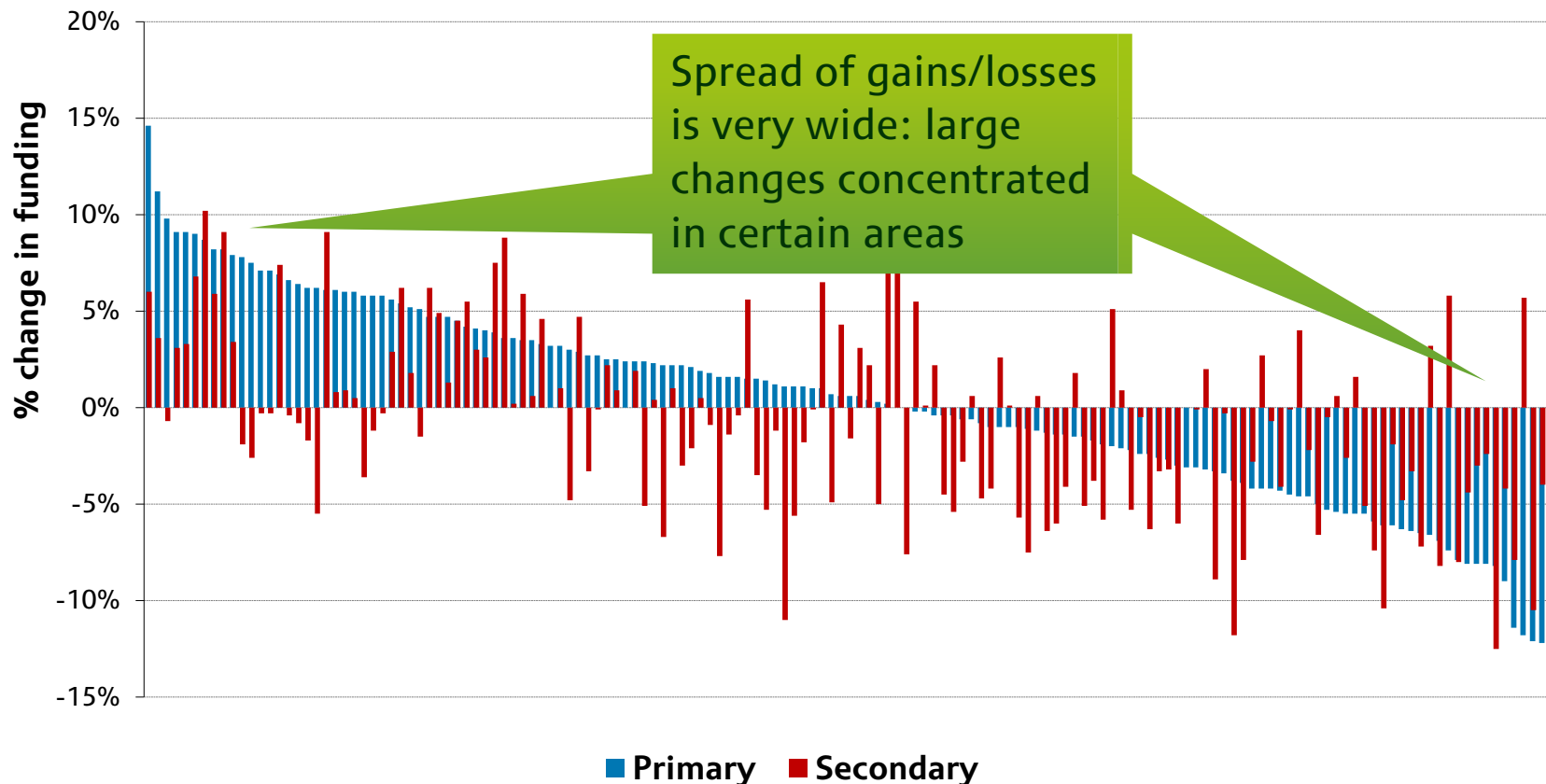


Cash-terms % change in funding per pupil between 2010–11 and 2014–15

— Secondary (existing) - - - Secondary (reform)

Regional effect of 'Low Disruption' option with combined ACA

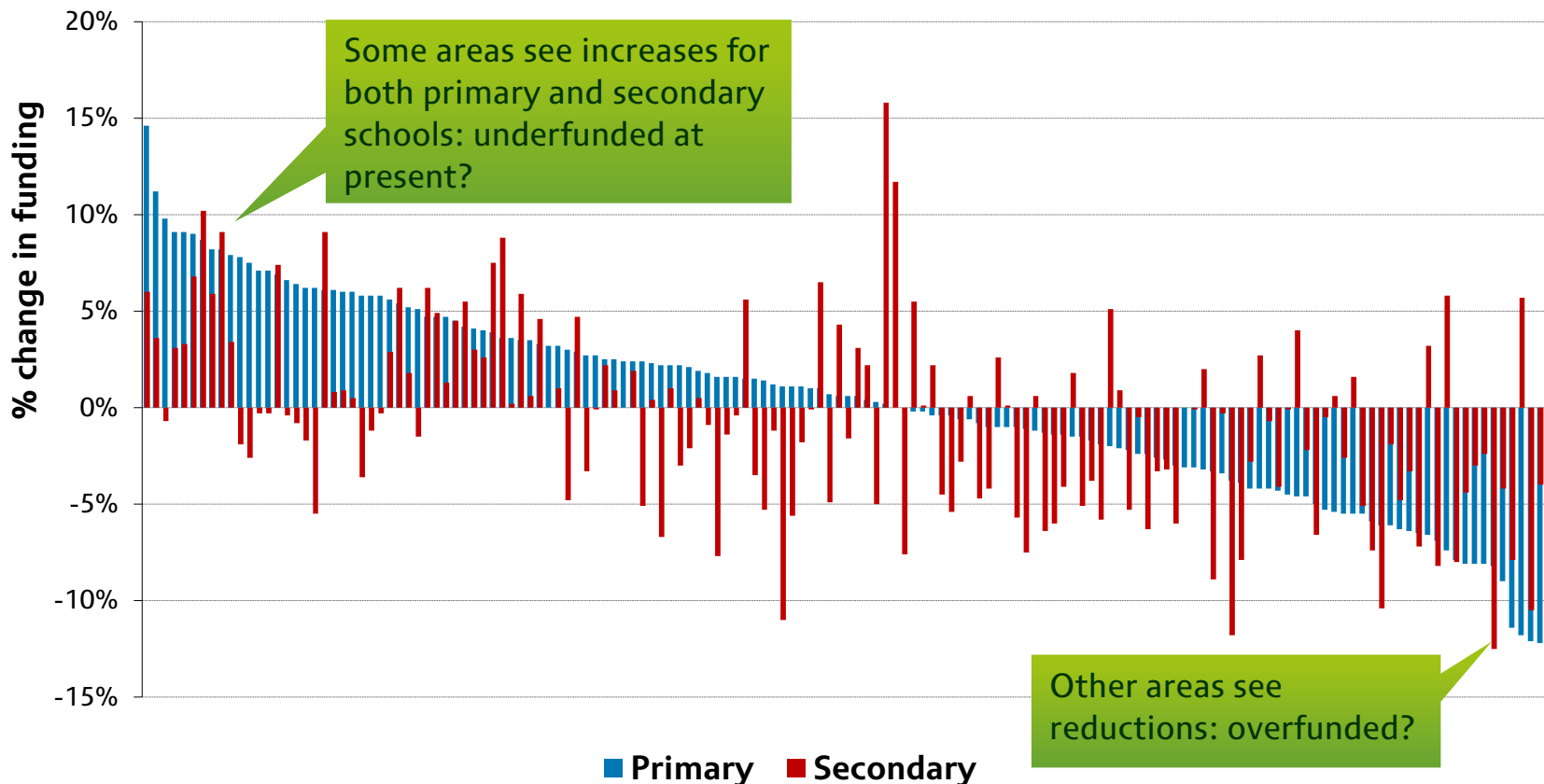
Changes in funding by local authority



Sources: For a full list of sources please see Figure 4.5 in main report.

Regional effect of 'Low Disruption' option with combined ACA

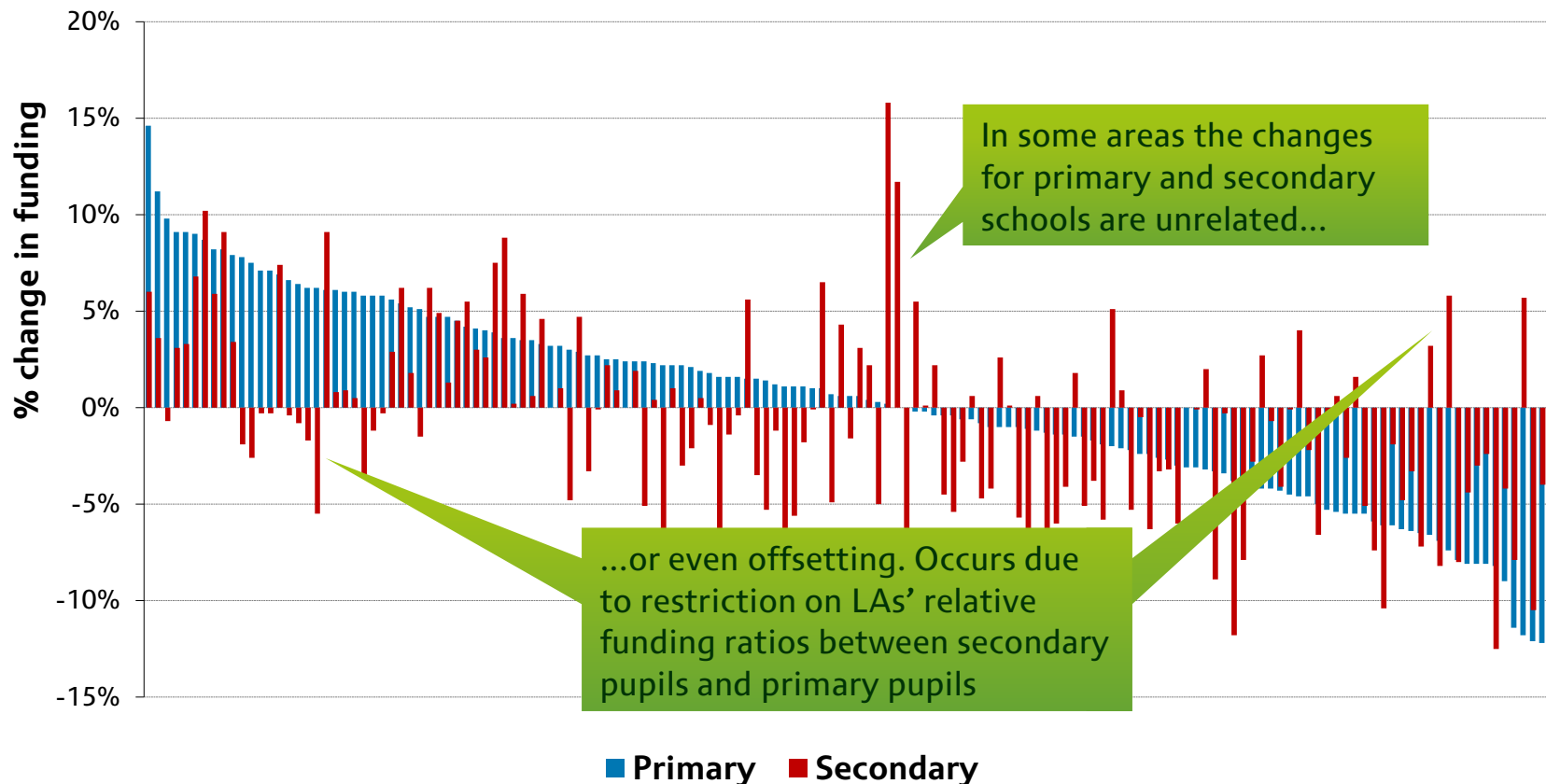
Changes in funding by local authority



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Regional effect of 'Low Disruption' option with combined ACA

Changes in funding by local authority



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Empirical analysis: summary

- Specific design of a NFF is crucial
 - Basic amount and lump sum proposed in DfE consultation would divert funding from secondary schools to primary schools
- Careful design cannot prevent significant disruption to schools
 - 1 in 6 schools lose at least 10%; 1 in 10 gain at least 10%
 - Nearly 20% of primary schools and 30% of secondary schools would see a cash-terms cut in funding between 2010–11 and 2014–15
- Disruption likely to be concentrated in particular local authorities
 - Areas which a NFF deems under/over-funded, *if* a NFF allocates the ‘right’ amount of funding
 - Areas which fund primary and secondary schools with a different relative generosity to that which NFF stipulates

Transitional arrangements to a NFF

- Considerable disruption to school funding levels even under ‘Low Disruption’ option
 - Significant proportion of schools would see cash-terms cuts
- We consider how to implement NFF under stabilising measures, e.g. floors and ceilings on annual loss/gain
 - Imposing a floor costs money, because Government provides extra resources to schools whose funding would have fallen by more than it
 - Reverse is true for a ceiling (so it can cross-subsidise a floor)
 - Floors closer to zero mean a slower adjustment, and therefore cost more money
- How long would it take, and how much would it cost, to get all schools onto the new system, under different floors?

Possible durations and costs of transition

Floor on annual
cash-terms in
loss in funding
per pupil

-1%

Possible durations and costs of transition

Floor on annual cash-terms in loss in funding per pupil	Length of transition (years)
-1%	30

Possible durations and costs of transition

Floor on annual cash-terms in loss in funding per pupil	Length of transition (years)	Cumulative total cost of transition (£m, cash terms)	
		Without ceiling on increases in funding	With ceiling of 10% per year
-1%	30	5,896	3,204

Possible durations and costs of transition

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-2%	15	2,699	1,216

Possible durations and costs of transition

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-3%	10	1,641	561

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-3%	10	1,641	561
-4%	8	1,124	462
-5%	6	811	377
-6%	5	609	303
-7%	5	474	240
-8%	4	370	187
-9%	4	296	142
-10%	3	235	104

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Conclusions

- At present, current funding system lacks a rational basis
 - Growing variation in funding levels across similar schools
 - Previous reforms have made school funding less responsive
 - Suggests that some kind of reform is sensible
- A NFF could rectify these shortcomings, but will create disruption
 - Careful design required to prevent unintended effects
 - Even so, large numbers of winners and losers are inevitable
 - Effects will be concentrated in particular local authorities
- Any transition to a NFF must be managed carefully
 - Process would have to be slow and expensive to avoid risk of large cuts in a single year
- Inevitable disruption is not, in itself, a reason not to reform
 - Cost of reform should be weighed against cost of status quo