

Understanding awarding organisations' commercial behaviour before and after the GCSE and A-level reforms

A REPORT PREPARED BY FRONTIER ECONOMICS FOR OFQUAL

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Foreword

We were asked to consider the market for the provision of GCSEs and A-levels in England and to assess the impact of the proposed GCSE and A-level reforms on this market. In particular, we were asked to consider possible future market scenarios and the regulatory implications that they would have for Ofqual.

In preparing this report, we have drawn on Ofqual's existing research and evidence, including, in particular, statistics and assessment of schools' switching behaviour with respect to exam boards and its latest survey of the demand-side efficiency carried out by Opinion Leader. We have reviewed other research and evidence including our past research for Ofqual and the Department for Education (DfE). We have also benefitted from discussions with Ofqual's senior staff who helped us understand Ofqual's regulatory approach, concerns and past experience.

In addition to a review of the existing research, we carried out in-depth discussions with five schools: Bedfordshire East Multi Academy Trust (BEMAT), Haberdasher's Aske's Boys School, Plashet School for Girls, Reading Boys School, Westminster Kingsway, four exam boards: AQA, Edexcel, OCR and WJEC, and two university admission bodies: SPA and UCAS. We also received advice and assistance from the Examinations Officers' Association (EOA).

We have drawn on our professional expertise as economists and used economic frameworks to approach the functioning of this market. Such frameworks do not necessarily take account of all considerations that the Government or the regulator may have when assessing the market for qualifications in England. This report is also a product of our independent assessment of the market for examinations and, while we discussed its contents in detail with Ofqual, it does not necessarily express Ofqual's views.

Finally, we would like to thank all our interviewees for their time and openness, Andrew Harland from EOA for the time and effort he put in helping us identify schools to interview, Emma Cochrane, Clare Rowntree and Richard Polom from Ofqual for their continued assistance and intellectual challenge to our work.

Frontier Economics

Executive Summary

Ofqual asked us to investigate the impact of the GCSE and A-level reforms on the commercial behaviour of exam boards. We understand that Ofqual is keen to understand whether the reforms are likely to lead to significant changes in the market and if so, the risks Ofqual as the market regulator would need to prepare for.

To answer Ofqual's question, we first sought to understand how schools and exam boards behave at present and what is driving their behaviour. We then established the nature of competition in the market as it stands today. Based on our findings, we developed possible future scenarios and appraised their likelihood and risks. Finally, we developed a list of issues we think would merit further investigation by Ofqual.

The market as it is today

We found that the market for qualifications has some unusual and challenging characteristics.

On the demand-side of the market for qualifications, we found that compared to most consumer goods markets where customers switch their suppliers following a small increase in price, schools choose exam boards predominantly on the basis of the quality of the syllabus exam boards offer. Price is not currently a factor in schools' decision about which exam board to choose. We believe that this is at least in part caused by the fact that the decision to choose an exam board is generally (with some difference for FE colleges) made by the Head of Subject who is separated from financial decision-making.

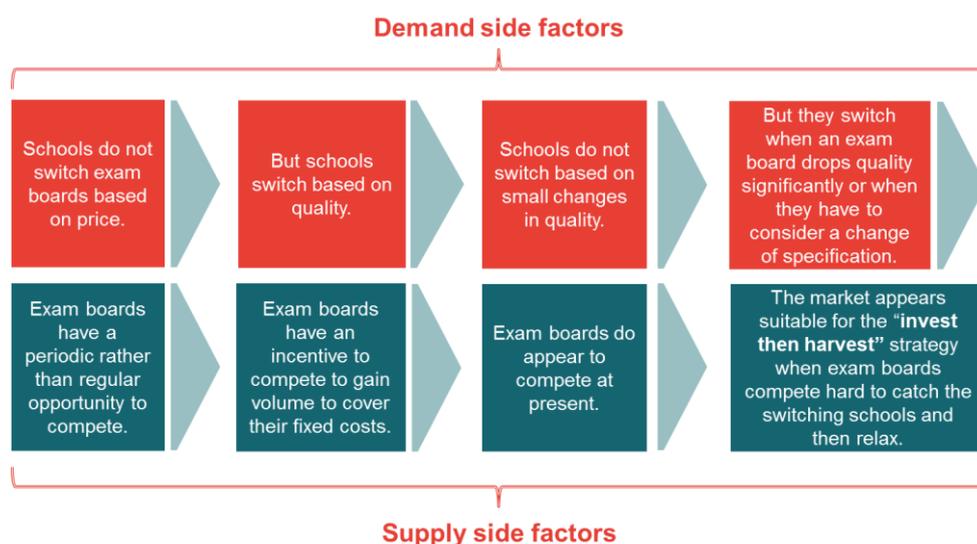
We also found that prices were not perceived as "outrageous" by schools. Schools also told us that the consequences of switching based on price and later finding that the quality of the exam board's offer is not suitable for learners was too high to take. These factors suggest that 'quality', however defined, and not price is the driving feature of competition in this market.

We also found that schools did not switch exam boards following a small change in quality but only following a relatively large change in quality. This occurred in two key circumstances: (i) when an exam board is perceived to have 'dropped the ball', making a mistake that schools consider serious such as a marking error; and (ii) when a change in specification forces schools to reconsider their exam board choice, and therefore temporarily reducing the cost of switching from one exam board to another. We believe that this switching behaviour is likely to be caused by the costs that schools incur when they switch, such as the costs of textbook and teacher preparation.

On the supply-side of the market we found some challenging market features as well. In particular, we consider that barriers to entry are likely to be high. This is mainly because of the non-negligible fixed sunk costs of (i) adapting products to new specifications and regulatory compliance, and (ii) investment in reputation that would allow schools to choose an exam board and the associated costs of reputational damage when things go wrong. Large fixed costs also require exam boards to win large volumes of activity to

cover those costs. This feature led us to conclude that the market would be unlikely to support a large number of exam boards in the long run.

Taken together, these demand- and supply-side features would suggest that competition is likely to be periodic rather than continuous, and take place at the natural breaking points in the market such as change in specification or an error by an exam board. Competition is also likely to take form of the ‘invest then harvest’ strategy where exam boards compete strongly to attract schools and relax their efforts somewhat once they have achieved that. Exam boards cannot, however, relax their competitive efforts too much since doing so might induce an ‘error’ which in turn will trigger switching at a high rate. The diagram below summarises our understanding of how the market functions today.



Despite these unusual and challenging features of the market, we found that the market does have competitive features. Exam boards are competing with each other to (a) attract switching schools and (b) to avoid ‘dropping the ball’ and losing custom. Similarly, despite the fact that customers are not price sensitive, schools reported that prices offered by the exam boards were “not unreasonable”, suggesting that at least for the time being, exam boards are keeping prices competitive.

We realise that Ofqual is concerned that competition on quality may have its downsides, in particular if it leads to exam boards offering examinations that are perceived as overly focused on helping students pass exams. Ofqual currently regulates standards to minimise that risk. We agree that this risk exists, and that Ofqual’s intervention is warranted. Perhaps unsurprisingly, neither schools, nor exam boards reported that this was a consideration. Importantly, the university admissions’ representatives we spoke to did not report any concerns on this front although we note that their focus was primarily on A-levels and they did not comment on GCSEs.

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The expected changes to the market

The GCSE and A-level reforms have the potential to change the market for qualifications. We considered a number of possible scenarios based on whether we can expect changes to schools' and exam boards' behaviour or not. We concluded that on the basis of the current evidence, the most likely outcome in the short run was enhanced Status Quo, i.e. accelerated competition on quality. This is because we found no evidence that schools would change their behaviour in the immediate future. We would therefore expect them to continue to choose exam boards primarily based on the 'quality' of exam boards' syllabus. Similarly, we considered that exam boards' incentives to gain or keep large volumes to recover their fixed costs would remain unaltered. Given that the reforms apply across the board to all general subjects, exam boards have a great opportunity to gain market share if they are able to win it but face a significant market share loss if they do not compete. As a result, we would expect to see an acceleration of the current competition on quality.

However, in the long run, exam boards may find this degree of competition uncomfortable and seek to differentiate themselves from one another to retain some degree of market power. This would suggest a shift towards greater differentiation in the long run.

There is also a risk that the current DfE and Ofqual trend towards greater standardisation and market cooperation may have the unintended consequence of facilitating market sharing between the exam boards. At present, exam boards do not have an incentive to share the market, at least not in large subjects, but this may change in particular if exam boards were to become fewer and more similar in size and structure.

Looking ahead

We based our prediction of the *future* outcome on our understanding of how the market works *today*. However, the market is evolving through regulatory intervention from Ofqual, and changes from central government as well as economic outlook. It might therefore be wise for Ofqual to monitor a wider number of risk factors than just those associated with what we consider to be the most likely future scenario. We also identified a number of areas where we believe further analysis would be required. Understanding these risks and carrying out this additional analysis would allow Ofqual to manage the competitive interaction in the qualifications market.

We identified key risks associated with the future market scenarios which we hope will serve as a useful input into Ofqual's thinking and decision-making. These were:

- **Risk 1: 'Race to the bottom':** the risk that exam boards compete on standards is going to remain a risk for as long as schools are under pressure of performance ranking and exam boards can compete on the quality of examinations. Ofqual will need to remain vigilant to this risk.

- **Risk 2: Pricing strategies:** as long as schools do not pay attention to prices, prices could creep up. This could happen either directly or through expensive, over-specified bundles. Conversely, should the market change and schools become price sensitive, exam boards may engage in price wars charging unsustainably low prices to retain schools' custom. Neither situation is desirable from a longer term market perspective.
- **Risk 3: Bundling and product confusion:** schools currently have different needs and characteristics, the market could segment based on these characteristics. Differentiation can lead to either better adapted product offers for schools, or complex and confusing offers that are more difficult to regulate from standards' perspective.
- **Risk 4: Market sharing:** while standardisation and common standards' development have many desirable properties, they also carry a risk of facilitating market sharing. Should exam boards' incentive to coordinate align, this risk would prove difficult to mitigate.
- **Risk 5: Exit of an exam board:** if one or more of the exam boards exited, the risk of coordination would increase. This could happen in particular if, for whatever reason, a particularly active market player exited. In this market, we see WJEC as such an active player given how consistently it grew over recent years.. WJEC is also currently smaller than the other exam boards which would suggest that it has an incentive to 'chase volumes' and does not have an incentive to coordinate with the others.
- **Risk 6: Coexistence of scenarios:** in the case of market segments based on different schools' needs, it is possible that we can see seemingly incompatible events (e.g. price wars and price hikes) occurring at the same time. This would lead to regulatory complexity. Coexisting scenarios will require a more complex response by Ofqual.

There is currently no clear indication that any of these risks will materialise, but there is a probability that some or more may materialise. As our last risk, Risk 6: Coexistence of scenarios suggests, many seemingly incompatible market features can coexist if the market segments.

Conclusion

Ofqual wanted to understand the impact of the GCSE and A-level reforms on the market for qualifications. We found that the market, despite some challenging features, is competitive and is likely to continue to be so in the near future. We expect that the scale of the changes brought by the reforms is likely to further accelerate this competition. This is because exam boards have an opportunity to gain additional market share but also face a risk of losing significantly to others if their offer is not competitive.

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We also identified a number of risk factors which we believe Ofqual will need to monitor to ensure that the market develops according to its expectations. While we did not have evidence that these risks were very likely to materialise, most are inherent in the features of this market and will therefore require the regulator's attention.

1 Key features of the market today

1. In this section, we investigate how the market for examinations works today. We first assess the features of the market that make it distinct. We find that schools choose exam boards based on quality rather than price and switching follows large changes in quality. We then use this evidence to understand how competition works in this market. We find that it is likely to take the form of occasional bursts of intense competitive activity following a large change in quality rather than continuous switching following small changes in price as would be expected in more usual markets. We find that despite these less common features, the market for qualifications appears to be functioning well at least from the competition perspective.

1.1 Analysing the examinations market

2. When assessing a market, we would expect to see a number of features that could be seen as ‘pointers’ that the market is unlikely to raise regulatory concerns. While there is no single list of features that need to be present for a market to function ‘properly’ and not one model of competition that is both perfect and realistic, there are some features that can be found in many common markets, such as consumer goods markets, none of which raise serious regulatory concerns. We considered the following indicators of unproblematic markets:
 - Consumers are price sensitive;
 - consumers will respond to relatively small changes in price and/or quality;¹
 - competition is activated by consumers’ willingness and ability to switch;
 - it is relatively easy for providers to enter the market; and
 - there are many providers competing for consumers’ custom.
3. We investigated whether these features can be found in the market for examinations. We used interviews with schools and exam boards as well as Ofqual’s research and data to ascertain this. All the evidence we found was consistent and remarkably similar across the data sources. We found that none of the features for a typical market were present. In particular, we found:

¹ Competition authorities generally define a market as a collection of firms whose customers would switch following a “small but significant increase in price” or “SSNIP”. The SSNIP test threshold is generally set at 5%. (See the Joint merger guidelines of the Office of Fair Trading and Competition Commission, now merged into the Competition and Markets Authority, paragraphs 5.2.11-12 http://www.ofc.gov.uk/shared_ofc/mergers/642749/OFT1254.pdf)

- Price is not at present a factor that drives schools' choice of exam boards. Schools are not price sensitive;
 - schools choose on the basis of 'quality';
 - schools need a larger change in quality to change their exam board than would be found in a typical market;
 - schools do not switch exam boards very often. There are switching costs for schools involving changing preparation for classes, buying new textbooks, changing teaching materials, etc;
 - barriers to entry for exam boards are high; and
 - there only four exam boards in the market, three large and one smaller exam board.
4. Based on our findings, the market for examination does not look typical. We assess each of these findings in more detail in the section below with the aim to understand whether the market is likely to function well for schools, exam boards and the regulator.

1.1.1 Competition on 'quality'

5. Our first finding was that unlike most typical markets, schools are not price sensitive. We received a consistent message from both exam boards and the schools that price was not a deciding factor for schools when they were choosing their exam boards. We were told that this is likely for several reasons:
- Exam boards are chosen by Heads of Subject who are not part of the active decision-making on the issue of budget.² We believe that this is the most important reason why price was not a deciding factor in schools' choice of exam boards.
 - Prices were considered "similar across exam boards" by schools and "not outrageous", suggesting that schools did not see a pressing need to consider price as a criterion. This effect may be temporary as schools' budgets become squeezed or exam boards take advantage of schools' price insensitivity.

² There was an exception to the rule – the FE college we spoke to suggested that it had no Heads of Subject. This gave a greater role to the Vice-Principal in the choice of exam boards. The Vice Principal does have a budgetary responsibility and is therefore not divorced from financial consideration in the same way the Heads of Subjects are in non-FE environment. However, despite this difference, the FE college we spoke to also placed weight on quality rather than price of examinations. This finding is similar to the Opinion Leader survey which suggests that colleges are more price sensitive than independent and secondary schools.

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- Some schools referred to the reputational risks of choosing an exam board, then running into difficulties with that exam board and finally having to explain to parents and the governors that that exam board had been chosen “because it was a little cheaper” than the others. This risk was considered not worth taking. We believe that this perception is likely to persist in the future.
6. Our results were very similar to the results of the Opinion Leader survey which suggested that secondary and independent schools did not change exam boards based on price and that colleges were only a little more price sensitive. This research suggested that only 19% of schools compared fees across exam boards. The reasons for not doing so ranged from an emphasis on specification and suitability to a de-emphasis on the role of price.
 7. These findings would suggest that exam boards should have a considerable degree of pricing power. However, prices were not found to be “outrageous” by schools. Some exam boards referred to the need “not to step out of line” on pricing and be perceived as more expensive than others. Others feared Ofqual’s regulatory intervention should they be perceived as expensive by schools.

Box 1: The importance of the cost of examinations for schools

A few schools and exam boards told us that examinations were the “second largest cost line after staff costs”. While the schools did not specify what proportion these costs represented, Ofqual suggested that it might be around 1% based on the assumption that the average expenditure per learner is around £4,500³, and the average expenditure on ten GCSEs would be around £300, in an 11-16 school with an even distribution of students. While these numbers may vary across schools, Ofqual is of the view that examinations may be the second largest outlay, although still comparatively small to staff costs.

The degree to which examinations are an important part of at least some schools’ budget may help Ofqual understand whether schools are likely to remain price insensitive in the long run. If the cost of examinations is indeed 5% of total costs of an average school, the price of examinations is less likely to become a relevant consideration in schools decision-making than if it represented say, 35%.

The Opinion Leader survey suggested that 70% of schools believed that their examination expenditure has increased. Schools explained this result by (i) an increase in the number of students taking qualifications (46%), (ii) an increase in fees (44%), (iii) an increase in resits (23%), (iv) more modular examinations and

³ Calculated using 2014/15 direct grant allocations and pupil numbers
<https://www.gov.uk/government/publications/dedicated-schools-grant-2014-to-2015>

(v) more vocational qualifications. This result is interesting as it suggests that the importance of the cost of examinations may have increased over time (thus making schools potentially more price sensitive in the future) and that prices have, at least to a degree, also increased (again, making schools possibly more price sensitive in the future). Ofqual may want to investigate this further.

8. We further investigated the nature of the ‘quality’ criteria that schools used to choose their exam boards. Schools and exam boards told us that the “quality of the syllabus” was the most important deciding factor. Schools appear to value features such as the ease of teaching, the ability of the syllabus to stretch students and whether the syllabus is going to be liked by the students. Schools also value the predictability of the examinations in terms of both questions and results and teacher support.⁴
9. We understand that Ofqual is concerned about the possibility that exam boards will compete with each other on offering the ‘easiest’ examination and is currently regulating qualifications to minimise that risk.
10. For understandable reasons, we did not expect to hear schools or exam boards recognise this concern. Some exam boards told us that the current Ofqual regulation has eliminated this possibility.
11. We discussed this possibility with the representatives of university admissions who believed that at present, there was no difference in the quality of A-levels between exam boards. The quality of GCSEs was perceived by all interviewees as “variable” but with no particular exam board or subject being singled out for deficiency or excellence.
12. We agree with Ofqual that without the intervention of a strong regulator there is a risk standards could fall. In a market where exam boards have an incentive to compete on quality to attract a school, ‘quality’ could be interpreted by some schools as easier examinations which in turn would give an incentive to competing exam boards to offer it to win the custom of those schools. Because of current accountability measures for GCSEs the pressure would be felt at the C boundary, as schools would look for the exam which was most likely to gain their students a grade C or above. We are aware that Ofqual currently tightly regulates standards to ensure that boundaries remain consistent across exam boards, subjects and years.

⁴ We note that the FE college we spoke to explained that vocational training had a different key requirement, i.e. whether a qualification was favoured by employers. We were given an example of cookery qualifications where City and Guilds was endorsed by the best Michelin starred restaurants which made it a “qualification of choice” that an FE college could not afford to replace with another qualification for as long as this was employers’ preferred qualification.

Key features of the market today

13. We have discussed the risk of the ‘race to the bottom’ with respect to standards with Ofqual which had spent considerable amount of time and effort assessing this risk. One element of the race to the bottom is the predictability of questions. We understand that Ofqual is concerned that when it is too easy for schools to predict the questions that will be asked, they will be able to narrow down the scope of their teaching and standards will fall. This risk could be higher in subjects which have a wider scope and where predictability would narrow the scope to which they are taught.
14. Ofqual is also aware that schools might have an incentive to coordinate through school groups to gain additional information about examinations and therefore artificially ‘improve’ their pupils’ results. There might be other aspects of the race to the bottom such as focus on those elements of subjects which are perceived as ‘easier’..
15. We understand Ofqual’s concerns. If true, they would have a negative impact in both the short and long run. In the short run, they might lead to different standards of examinations for different pupil groups within the same year as some pupils would pass examinations that are perceived as easier. In the long run, we would expect other schools to adopt similar approach and choose an exam board that is perceived as easier or join a school group to obtain the same benefits as other schools. This would reduce overall standards of exams.
16. All schools we have spoken to told us that predictability of exams was very important to them as it allowed them to prepare their pupils adequately. This leads to a dilemma for the regulator: On the one hand, the pressure for the increase in predictability may create a pressure on exam boards to compete by ‘racing to the bottom’ on standards. On the other hand, predictability is key to schools’ understanding of the standards and being able to prepare their pupils for exams.
17. Moreover, the independent and selective state schools we have spoken to told us that they wanted to “stretch” their pupils and would choose the “hardest” exam on offer. If that were possible, the market might split in two with one segment choosing the exams that are perceived as ‘easy’ and the other choosing exams that are perceived as ‘hard’. This would further complicate Ofqual’s regulatory response. Any such response would need to balance a number of conflicting concerns.
18. On the whole, we found that exam boards were thinking very carefully about the quality of their offer in terms of the quality of the syllabus, available teaching material and teacher support. These are the features that exam boards would present and market to schools heavily when they develop a new product in a subject. Other aspects of quality such as marking and predictability of results are not generally considered when a choice of exam board is made but will be key to schools’ switching decision.

Key features of the market today

19. Finally, and as an aside to the finding that it is the Heads of Subjects who play a crucial role in the choice of a subject in most non-FE type schools, we found limited evidence of bundling of different subjects, i.e. one exam board offering a bundled offer of two or more subject examinations. Unless schools' behaviour changes dramatically in the future, we would not expect bundling of subjects by exam boards to become a dominant business strategy in the market. However, bundling can occur *within* a subject and take the form of bundling of examinations and teacher support.

1.1.2 Switching decisions

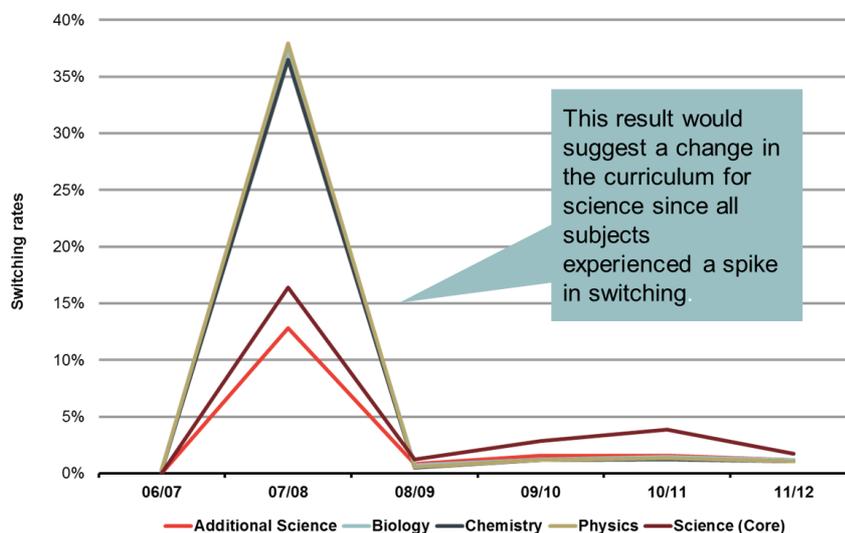
20. Our second finding, based on the views from schools and exam boards alike, was that barriers to switching were high and that only significant changes in quality would trigger it. In particular, we found that schools were likely to switch their exam board only in the following three circumstances:
- A new Head of Subject arrives and instigates a change of exam board, electing whom it prefers.
 - The existing exam board is perceived to 'drop the ball'.
 - There is a change in subject specification.
21. Only two of these three circumstances can be seen as switching based on quality. The change of the Head of Subject is more appropriately described as '**churn**' since it is not based on schools' dissatisfaction with quality but rather a Head of Subject's personal preference.
22. The other two categories of switching circumstances correspond well to the statements by schools and exam boards that switching does not happen often and schools face switching barriers.
23. Schools suggested that a small change in quality, for instance, in the form of another exam board showing a school its syllabus or support material which might appear a little more appealing than the existing exam boards' offer, would not normally be enough to cause a change. A change would normally happen if the existing exam board makes a significant mistake or is perceived to do so. Schools refer to this as an exam board "**dropping the ball**".
24. Marking was mentioned most often as a factor where an exam board can make a significant mistake that will prompt switching. It would appear that while marking does not form a part of the initial offer that makes schools choose an exam board, it will become an important factor influencing schools' decision to leave an exam board.
25. Moreover, schools discuss exam boards' mistakes between them. This would suggest to us that if an exam board is perceived to 'drop the ball' by others, it will be punished not only by the schools that have experienced this drop in quality

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but may also be punished by schools which did not perceive that drop in quality themselves. This effect may be more pronounced in the case of negative publicity in the media which may lead to pressure on schools from parents or the governors to take action against such an exam board.

26. The effect of the **central change in specification** can be equally dramatic albeit driven by more positive decision making. While in the course of the existing subject specification, schools may not see a point in incurring all the costs of changing an exam board for what can be only a small improvement in quality of the offer, when specifications for a subject change, schools may take advantage of this and rethink which exam boards they should be supplied by. This is because at the point of specification change, all schools need to incur the cost of change, whether they stay with their exiting exam board or switch. This gives them the opportunity to revisit their past choices and gives exam boards an opportunity to gain market share if they have a good product to offer. **Figure 1** below shows that switching generated by the changes in the science curriculum that occurred in the school year 2007/8.

Figure 1. An illustration of the effect a change in specification in GSCE Sciences had on switching rates



Source: Ofqual

27. The results of the Opinion Leader survey were compatible with these findings. Suitability of the syllabus was the most important reason behind the decision to switch with other quality metrics such as “meeting the needs of the students” given as other important reasons. Change in specification also featured prominently. Our research suggests that the quality of the syllabus should be seen

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as the key *criterion* of schools' choice of exam boards, but not necessarily a *trigger* for switching. Switching is more likely to be triggered by considerable dissatisfaction with some element of the quality of the exam boards' offer (i.e. some form of 'dropping the ball') or change in specification.

28. Suitability of syllabus becomes a focal point of switching when exam boards develop a new syllabus which no longer meets the needs of the school. At this point, barriers to switching are lowered – schools need to adapt to a new syllabus anyway – and therefore an exam board that produces an underwhelming syllabus will not be chosen going forward. In this sense, our research mirrors the survey results of Opinion Leader.

1.1.3 Barriers to entry and market structure

29. Our final findings about the market for examinations are that (i) barriers to entry are likely to be high and (ii) the market is likely to only support a small number of players.
30. We found that exam boards face non negligible **fixed sunk costs**. These are the costs of developing the syllabus and support material, the costs of training examiners, the marketing cost and the regulatory cost. In order to recover those costs, exam boards will need to achieve larger volumes. This in turn will limit the number of exam boards that can remain in the market as each exam board needs to capture a sizeable chunk of the market to remain viable. This finding was based on both our assessment of the exam boards' responses and our discussions with Ofqual. We note that PwC made a similar finding in its 2005 report on the market for qualifications in the UK, stating that “economies of scale favoured larger exam boards”.⁵
31. Exam boards also reported non-negligible **variable costs of marking** which are incurred only if exam boards win schools' custom. While we agreed with exam boards that these costs vary in proportion with the volumes, we considered that there was some degree of inflexibility in these costs given by the need to mobilise the examiner resources at a relatively short notice – exam boards will only truly know how many customers they have when schools enrol their pupils for examinations. This typically only happens a couple of months prior to examination, giving exam boards very short notice to find the required examiners. We would expect exam boards to have a roster of examiners well in advance tailored to their expected volumes. In our view, this introduces a degree of risk and inflexibility in these otherwise fully volume-related costs.

⁵ “The Market for Qualifications in the UK, Final Report to: Qualifications and Curriculum Authority, Qualifications and Curriculum Assessment Authority for Wales, Council for the Curriculum, Examinations and Assessment for Northern Ireland. PwC, 2005, see, for example Figure 1.7.

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Box 2: exam boards' cost structure

We note that we did not have access to exam boards' cost information and based our findings on discussions with exam boards and with Ofqual. Our discussions with exam boards were quite general and focused on understanding their perception of their cost flexibility as a factor in establishing the riskiness of their business model and understanding the cost recovery mechanism that will be required.

If Ofqual wanted to understand exam boards' business model further, it would be helpful to understand the degree to which exam boards' costs are fixed, semi-fixed or variable and the extent to which fixed costs are sunk and unrecoverable. The 2005 PwC report supports our intuition that fixed costs are likely to be important. A further analysis of costs would also be a basis for better understanding whether exam boards are making a reasonable return on their investment. This in turn would allow Ofqual to determine whether exam boards are making excessive profits or, conversely, they are not generating enough revenue to invest and innovate. Our discussions with exam boards and Ofqual did not suggest that either of these extremes is occurring at the moment, but this was based on a qualitative assessment and would require further analysis to confirm.

32. We found that other barriers to entry, reputational in particular, are likely to impact on the willingness of providers from outside of the market to enter. Most exam boards referred to the negative publicity that any mistake or perceived mistake draws in the media. Unless rewards in the market are high, this barrier may prove significant.
33. Moreover, even if potential providers were willing to take this risk, they might still find it difficult to enter this market as schools' emphasis on quality and risk aversion may make them reluctant to choose any other than an established examination provider. This may narrow the pool of potential entrants to examination providers from adjacent markets and other geographies.
34. With respect to the rewards which might make the industry attractive to new entrants, we note that schools currently consider prices as "not outrageous" suggesting that such high profits may not be present. However, as with cost data, this suggestion is based on our discussions with the industry and this assumption would need to be verified with an exam board profitability analysis.
35. Finally, actual past entry is usually a good proxy for how difficult it is to enter a market. The examinations market has had one notable entrant in the past couple of years – WJEC. WJEC was in a privileged position of having a near monopoly in the qualifications market in Wales and being able to sell additional volumes into the English market. This strategy paid off and WJEC grew its market share

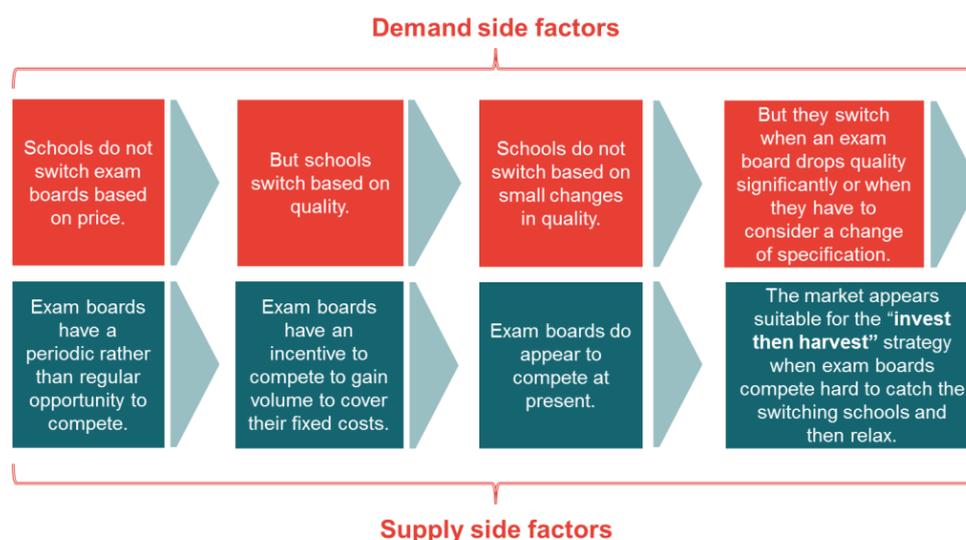
in some subjects, GCSE English in particular. CCEA would be the natural other new entrant into the English market. However, we understand from Ofqual that CCEA made a public statement that it would not be participating in the English market in the future. We conclude that there are no obvious future entrants into the English qualifications market.

1.2 Functioning of the market today

36. Based on our findings, it would appear that the market for qualifications is not a typical un-problematic market. However, this does not necessarily mean that it is a mal-functioning market, it simply indicates that it requires closer inspection and may warrant regulatory oversight. We therefore focused on understanding whether there were sufficient forces in the market ensuring that exam boards are disciplined and provide a good service to schools and, if they do not, what additional regulatory intervention may be required to address such concerns.
37. We found that although schools were not price sensitive, they were sensitive to the changes in quality. We discussed in Section 1.1.1 above that the term ‘quality’ could be ambiguous although we concluded that at present we did not have any evidence suggesting that it should be viewed negatively. With that in mind, the mere fact that schools are not price sensitive does not necessarily mean a negative outcome for the market as focus of competitive interaction will simply shift from price to quality.
38. We also found that schools did not react to small changes to quality as they faced significant barriers to switching. This is potentially a more problematic finding as this would suggest that exam boards have a strong degree of market power. However, we also found that schools are highly responsive to a larger drop in quality (e.g. a marking error) and switch in large numbers on occasions when barriers to switching are lowered (i.e. when specifications for a subject change). We found that this threat of switching had a strong disciplining effect on exam boards and forced them to compete to provide the best quality offer to schools.
39. We conclude that at present, competition in the examinations’ market could be characterised by an **‘invest then harvest’ strategy** whereby exam boards compete very strongly to attract schools at the point when they are likely to switch, i.e. when there are changes in subject specifications or when one or more exam boards are perceived to have dropped their quality. Exam boards can relax their competitive efforts somewhat after these competitive periods have passed but not to the point of reducing their quality significantly as this would trigger schools switching. See **Figure 2** below for an overview of this strategy.

Key features of the market today

Figure 2. Understanding of how the market works today



Source: Frontier

40. Whilst this mode of competition is not the most typical, it is a perfectly valid competitive outcome that can be found in many industries. For instance, a similar strategy can be found in retail financial products' markets such as savings accounts with time limited 'taster' rates or mortgages with initial low-interest fixed fee periods which allow providers to attract customers away from their current providers in situations when consumers are reluctant to switch, and recoup their investment through those customers who have not switched.
41. Whether this mode of competition is beneficial and sustainable will depend on how long and deep the 'investment' periods are compared to the 'harvesting' periods. For instance, very frequent changes to the curriculum may shorten the time over which exam boards will recoup their investment and prevent them from remaining viable. Similarly, greater willingness of schools to switch when switching barriers are lowered or when quality drops will intensify the investment period and benefit schools.
42. Based on our interviews, discussions with Ofqual, and appraisal of the existing data and research, we believe that at present the market for qualifications appears to be working well. However, the mode of competition we have discovered has its risks, in particular in the form of price hikes and a potential for the 'race to the bottom' on standards. Moreover, the market is likely to change following the implementation of the GCSE and A-level reforms. We discuss these issues in sections 2 and 3 below.

Key features of the market today

2 The impact of the GCSE and A-level reforms and market scenarios

43. In this section we consider how the market for examinations is likely to evolve in the future taking account in particular of the current GCSE and A-levels reforms. We use the learning from the previous section about how the market works now to establish possible future scenarios. We then appraise those scenarios in terms of their risks and benefits for schools, exam boards and the regulator. Finally, we assess the likelihood of these scenarios to take place and the conditions that would need to occur in the market for those scenarios to materialise.

2.1 Deriving scenarios for the future

44. When assessing the future of the market for examinations, we asked the stakeholders (schools, exam boards, university admissions representatives and Ofqual) a series of questions aimed at understanding whether some of the key features of the market that we observe now are likely to change.

45. In particular, we explored the following:

- Will the GCSE and A-level reforms make schools switch in larger numbers than in the past?
- Are schools likely to change their behaviour and become price sensitive? And if so, will price become the most important factor?
- Will the reforms lead to stronger competition?

2.1.1 Perception of the scale and scope of the changes by schools

46. The GCSE and A-level reforms will bring a change to the curriculum across to all subjects. It is therefore more significant in scope than most previous changes. The GCSE and A-level reforms will also change the way teaching and examinations are delivered. Teaching will move away from a modular approach towards a linear approach with one final exam. Similarly, AS-levels will be decoupled from A-levels. Both changes will increase the emphasis of one, final exam towards which learners will be progressing. We consider that in the case of GCSEs this will mean less scope for ‘dry runs’ through ‘double entries’. In the case of A-levels, we consider that some learners may skip AS-levels as AS-levels will no longer form part of the final A-level results. Exam boards believed that this would make schools take fewer exams and therefore the overall market would shrink. The schools we have spoken to confirmed that fewer AS-levels were likely to be taken. They believed that AS-levels would “die out” as a result of the GCSE and A-level reforms.

47. The evolution of the market is likely to depend on whether schools are aware of the scale and scope of the change that the GCSE and A-level reforms will bring. For instance, if schools consider the reforms to be a ‘common’ change that happens regularly as consecutive administrations are attempting to improve the national curriculum and the way it is delivered, then even if the changes are large, the response by schools may not reflect it. That in turn will affect how exam boards respond and how the market evolves. **Schools’ perception** of the importance of the change is therefore likely to be as important as the change itself.

2.1.2 Quality as the only factor of schools’ decision making

48. The evolution of the market is also likely to depend on whether schools will continue to consider ‘quality’ of exam boards’ offer as the only determinant of their choice of exam boards. We were able to establish that at present, schools do not take price into account when choosing their exam board. We wanted to know whether this was likely to continue following the GCSE and A-level reforms. If it continued, we would expect to see the same type of competitive interaction from exam boards. If price became a factor, the nature of exam boards’ offer would evolve. The degree to which price would be a factor would influence the nature of exam boards’ offer. In theory, there could be three possible outcomes:

- **Only quality matters:** Schools remain price insensitive and competition continues to focus on quality.
- **Price becomes one of the factors that schools consider:** Schools become somewhat price sensitive but they make their final choice of exam boards based on an overall ‘value for money’ criterion where price is only one of the considered criteria. The lower the perceived difference in the ‘quality’ of exam boards’ offer (e.g. the greater the similarity of exam boards’ syllabuses), the greater the role price would play in the final school decision.
- **Price becomes the key factor of schools choice:** This could happen in two circumstances (which can occur at the same time):
 - *Schools’ budgets become very tight:* If schools had to make cuts to their cost base as a result of serious budget cuts, they may no longer be able to afford some of exam boards’ offers or at least some elements of the offer such as teacher support.
 - *Schools perceive the difference in quality of exam boards’ offer as limited:* If schools believed that exam boards offer essentially the same product, the only differentiating factor left would be the price. In that case, price may become the key metric determining schools’ choice of exam boards.

The impact of the GCSE and A-level reforms and market scenarios

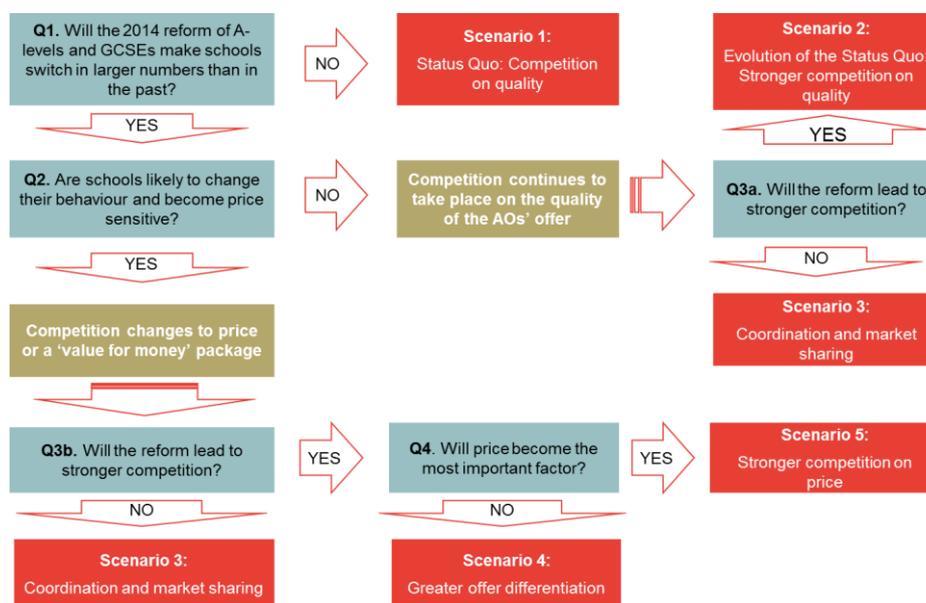
2.1.3 Impact of the changes on exam boards' appetite for competition

49. The GCSE and A-level reforms will have an impact on exam boards as well. There will be a *direct effect* in the form of required changes to the qualifications offered by exam boards. There will also be an *indirect effect* that will be based on the expected reaction of schools.
50. Exam boards understand the market that they are operating in. They are aware of the schools' ability to punish them for mistakes or to switch at a time of change. Economic theory predicts that exam boards will respond to this challenge in one of the following ways:
- **Exam boards will intensify competition with each other:** When products are comparable and consumers understand a market well, providers have to compete strongly to retain consumers' custom. Depending on whether price or quality is the key factor for consumers, providers will either focus on strong competition on price, strong competition on quality, or a mixture of both.
 - **Exam boards will coordinate to relax competition with each other:** Strong competition is not a comfortable position for providers to be in. It will depress their margins and may lead to their market exit. In some circumstances, providers may attempt to avoid this pressure by overtly colluding or simply observing each other's behaviour and avoiding direct competition. This could be done in two key ways:
 - *Market partitioning:* Providers will retrench to market segments where they perceive their strength, and will not provoke competition with other providers by entering into their perceived 'strongholds'.
 - *Coordination of price or quality:* Providers will not try to undercut each other on price, allowing prices to 'float up' slowly based on the understanding (tacit or explicit) that it is not in providers' common interest to trigger a 'price war' since that would lead to a margin loss for all the providers. A similar coordination is possible on quality where all the providers would offer the minimum quality required but no more.
 - **Exam boards will seek to differentiate themselves to retain a degree of market power:** A less detrimental way to avoid competition than market sharing would be differentiation. If providers offer very different products from each other, consumers will not be able to make an easy trade-off between them. This will give consumers choice and variety and allow exam boards to retain a degree of market power and therefore higher margins.

2.1.4 Possible future scenarios

51. Drawing on the potential market responses to the future changes we identified above, we derived five scenarios that could occur. We present this assessment in the form of a decision tree with three key issues that, in our view, would alter the outlook of the market in the future: (i) the perception of the scale and scope of change by schools (Q1), (ii) the importance of quality as the only deciding factor for schools (Q2 and Q4), and (iii) the appetite of exam boards for competition (Q3a and Q3b). See **Figure 3** below for the details of this assessment.

Figure 3. Deriving the future market scenarios



Source: Frontier

52. Based on the possible answers to our questions, we were able to establish five scenarios for the future:
- **Scenario 1:** Status Quo – competition on quality
 - **Scenario 2:** Enhanced Status Quo – stronger competition on quality
 - **Scenario 3:** Coordination and market sharing
 - **Scenario 4:** Greater offer differentiation
 - **Scenario 5:** Stronger competition on price

The impact of the GCSE and A-level reforms and market scenarios

2.2 Appraising future scenarios

2.2.1 Scenario 1: Status Quo – competition on quality

53. If schools perceive the GCSE and A-level reforms as ‘business as usual’ and do not modify their behaviour, we would expect the market to continue to be the same as it is now. This would mean continued competition on quality of exam boards’ offer with focus on the syllabus and periodic switching triggered by changes to the curriculum or exam boards’ mistakes such as marking errors.
54. There is not necessarily anything wrong with this scenario given that we have concluded that competition at present works well. However, given the scale and scope of the GCSE and A-level reforms, this scenario could be perceived as a missed opportunity if we were to see no increase in the switching appetite by schools and no increase in competitive activity by exam boards.

2.2.2 Scenario 2: Enhanced Status Quo – stronger competition on quality

55. If schools understand the GCSE and A-level reforms as a major change and if exam boards are aware of this understanding, schools are likely to become very active in their choice of exam boards, and exam boards will invest and compete to win schools’ custom.
56. Under this scenario, we would expect to see accelerated levels of activity in the market. Exam boards would be expected to engage in strong marketing of their products. They would also be expected to invest in the development of the syllabus and exam structure that suit schools’ needs. We would also expect exam boards to innovate and offer some products for free (e.g. online materials, some teacher training, etc.).
57. The advantage of this scenario is that it will lead to high quality innovative offers by exam boards. There are several risks attached to this scenario. Firstly, as with any competition on quality, there is a risk that this is interpreted by exam boards as the ‘race to the bottom’. Ofqual would therefore need to remain vigilant in its regulation of standards. Secondly, competition on quality might lead to an arms race’ by exam boards that would be incentivised to offer ever more elaborate products beyond what is required by Ofqual. Thirdly, given that schools are not price sensitive and competition takes places only on quality, this scenario might lead to price hikes.
58. Finally, this scenario is intensely competitive and requires strong investment by exam boards. This might induce exit of weaker exam boards and greater consolidation of the market. This scenario also assumes a degree of standardisation of exam boards’ offers. There are two reasons for that. (i) Ofqual imposes increased standardisation over time and (ii) under this scenario, exam boards do not differentiate themselves, which means that as soon as one exam board introduces an innovation, the others copy it. Taken together, intense

competition, potential market consolidation and great homogeneity of offers might, in the long run, tip the market towards market sharing.

2.2.3 Scenario 3: Market sharing

59. It is possible that exam boards would consider competition (either on price or on quality) too hard to sustain, in particular given the extent of the GCSE and A-level reforms' changes. Exam boards could avoid competition by coordinating. Since explicit coordination in the form of a cartel is illegal (and entails criminal sanctions), exam boards may prefer softer coordination based on unilateral following of each other's behaviour with a tacit understanding of what is in their common interest.
60. One way to do this would be for exam boards to focus on the market where they are currently strong. For instance, AQA has a strong market share in English, Edexcel in Maths and OCR in Sciences. Coordination could take the form of exam boards relaxing their efforts to develop a strong offer outside the area of their core strength on the understanding that the others will do the same.
61. The risk of this scenario occurring increases as standardisation of specification increases. As exam boards' offers become more and more similar, schools find it easier to compare them and switch between them. This intensifies competition between exam boards to a degree which may lead to an exit of an exam board. An exit of an exam board would consolidate the market further creating easier conditions for coordination. Each highly competitive scenario therefore carries a risk of tipping into market sharing.
62. This is the only future scenario with an unambiguously negative outcome. The outcome of this scenario is also difficult to remedy since it follows directly from the market structure.

Box 3: Market sharing

Market sharing or coordination is a situation whereby providers in a market decide to share it rather than competing for it. Economic theory sets criteria that allow us to assess when market sharing is likely to occur. They fall into two categories (i) the ability of firms to coordinate and (ii) the incentive to coordinate.

Ability to coordinate

Coordination is possible if there are relatively few players in a market. If there are many, it will be difficult for them to all reach an agreement, be it tacit or explicit. There is no definite number, but a four-player market, which the market for examinations is, would typically be one where competition authorities would consider coordination as possible.

High barriers to entry are another pre-condition for successful coordination. In a market with low barriers to entry, any attempt to raise margins through

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coordination would be thwarted by new entrants willing to benefit from high profitability in the industry. We have found that the market for examinations has high barriers to entry.

Incentive to coordinate

Similarity of products will increase the incentive of firms to coordinate. This is because commoditised products are easy for consumers to compare and will make them choose the cheapest option (or best quality) on offer. This in turn will lead to intense competition and low margins. Coordination on pricing (and its equivalent on quality) will allow firms to avoid margin erosion. The increasing standardisation of qualifications might create greater commoditisation and therefore create an incentive for exam boards to coordinate.

If one or more of the firms has a slightly different cost structure or business model, it would not have an incentive to coordinate with others. For instance, a firm that needs to achieve scale and is in the process of growing market share will not have an incentive to coordinate its behaviour with others as this would undermine its growth objective. In the market for examinations, WJEC has grown its market share from a low basis to around 10% in the overall market.⁶ Given that we found that volumes matter in this market, WJEC may have an incentive to continue to grow its market share rather than coordinate with others.

Similarly, a firm which has a cost advantage over others would not have an incentive to halt its market share growth by sharing the market with others. In the market for examination, AQA appears to have grown larger than the other exam boards with an overall market share in excess of 40%.⁷ It is possible that this market share was achieved through greater efficiency. If that were the case, AQA would not have an incentive to coordinate with others, preferring instead to grow its market share further.

Benefits of market coordination

While coordination in the form of market sharing or partitioning is unambiguously a bad outcome, not all forms of coordination between suppliers are necessarily detrimental for the customer. In many industries, suppliers cooperate to develop a common standard which will allow compatibility of their products for their customers. For instance, CDs are all of the same size which allows consumer to choose freely between different manufacturers of CD players. Coordination between manufacturers to develop a common standard may therefore in some circumstances be beneficial for consumers. This result is

⁶ Based on Ofqual's evidence, WJEC had a market share of 11% in the overall GCSE market and 9% in the overall A-level market in the school year 2011/12.

⁷ Based on Ofqual's evidence, AQA had a market share of 44% in the overall GCSE market and 42% in the overall A-level market in the school year 2011/12.

not, however, unambiguous. Coordination prevents competition between manufacturers to become the winning standard (examples of such competition were the VHS/Betamax technology ‘war’ in the 1970s and 1980s or the Blu Ray/HD DVD technology war in 2000s). Such competition can be valuable as it leads firms to innovate.

We understand that in the market for qualifications, there is an undeniable benefit from exam board coordination in the form of comparability of certain qualifications. However, Ofqual may want to test whether such benefits outweigh the potential risks of such coordination in the form of reduced innovation and a risk of market sharing.

2.2.4 Scenario 4: Greater differentiation

63. It is possible that exam boards will respond to the changes in the market and the increased competition that they will entail by trying to develop a differentiated offer. This could take the form of product bundles aimed at particular types of schools. Such bundles could include teacher support or additional revision material. Exam boards could also develop a particular type of examination, e.g. electronic only examination. Exam boards could also explore the national curriculum specifications and make strategic decisions regarding the elements they can still choose from and implement these specifications in a different way to their competitors.
64. There is not necessarily anything wrong with this type of competition. It occurs in a wide variety of consumer markets (most retail consumer goods markets) and takes account of varied consumer preferences. In the case of the market for examinations, the advantage of this scenario would be greater choice for schools and innovation by exam boards. It is also attractive for exam boards as it allows them to retain a degree of market power, as no exam board offers exactly the same product as another exam board and schools therefore do not see exam boards as perfect substitutes. This would allow exam boards to retain higher margins.
65. The possible disadvantages would include reduced comparability and clarity of exam boards’ offers. This might make it harder for schools to choose between exam boards offers and for Ofqual to regulate these products. A lack of transparency may also lead to price hikes, as neither schools nor Ofqual will be able to understand the products and their pricing well enough.
66. As with any competition on quality, there is a risk that this is interpreted by the market as the ‘race to the bottom’. In the case of differentiation, this would mean harder examinations aimed at those schools (or pupils) that want to stretch their pupils and easier examinations aimed at ‘grade chasing’ schools (or pupils).

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2.2.5 Scenario 5: Stronger competition on price

67. It is possible that schools will be subject to tighter budgets and will need to consider the price of examinations. Similarly, if Ofqual achieves a great degree of standardisation of exam boards' offers, price would remain the only unregulated aspect of the offers and therefore subject to competition – if all other aspects of exam boards' offer are the same, schools are likely to choose the cheapest exam board.
68. This scenario is beneficial to schools' finances as it allows them to minimise the expense on examinations. However, the focus on price might undermine innovation by exam boards, as exam boards will reduce the quality aspect of their offer to the regulatory minimum in order to achieve price competitiveness. As any highly competitive scenario, this scenario carries a risk of market exit by one or more of the exam boards as a result of intense competition. This would consolidate the market which might make the risk of market sharing more likely in the long run.

2.3 Assessing the likelihood of future scenarios

2.3.1 The most likely outcome in the immediate future

69. The five scenarios we identified are theoretical possibilities based on economic theory. Whether they will materialise in practice, and if so how, is a matter for empirical assessment.
70. Our discussions with schools suggested that schools were aware of the scale and scope of the change that the GCSE and A-level reforms represent and they were preparing to use this opportunity to reconsider their options across all subjects. Schools also suggested that quality will continue to be the key factor in their choice of exam boards.
71. Exam boards perceived the GCSE and A-level reforms as an opportunity to gain market share if they invest in developing good quality products and market it appropriately to schools. Conversely, should they not invest appropriately, they would be at a risk of considerable market share loss.
72. Based on our discussions with exam boards, it would appear that all four exam boards, (AQA, Edexcel, OCR and WJEC) are preparing intensely for the competition that is likely to ensue following the GCSE and A-level reforms. While strategies of individual exam boards are confidential, we found some common themes. All exam boards were investing in developing the best product to attract schools in all key areas such as English, Maths, Sciences, Geography and History. We found no general suggestion of tacit market sharing, i.e. focusing on one's area of strength rather than competing across the board. We felt that the exam board that would take that approach would misjudge its competitors

and was liable to lose market share. Exam boards also followed closely marketing activities by other exam boards and planned their own.

73. Based on our discussions with exam boards, we believed that Scenario 2: Enhanced Status Quo with intensified competition on quality was the most likely outcome of the GCSE and A-level reforms. As discussed before, this scenario produces high degree of competition on ‘quality’ and little competition on price. The outcome of this scenario is therefore positive for as long as (i) Ofqual is confident that its regulation of standards ensures that competition on quality does not mean a ‘race to the bottom’ for at least some of the aspects of the examinations, and (ii) prices remain ‘reasonable’.
74. Finally, we understand that Ofqual is interested in the impact of the GCSE and A-level reforms on smaller, cross-subsidised subjects. Based on our discussions with exam boards, we believe that the GCSE and A-level reforms and the intensified competition that it may bring somewhat accelerate a general trend towards cost recovery by exam boards on all subjects and, therefore, represent a further move away from cross-subsidisation.

Box 4: Cross-subsidisation of smaller subjects

Small subjects (which are low in volume and sometimes high in cost) are often cross-subsidised by revenues exam boards raise from larger volume, lower cost subjects. These subjects are often less common languages (e.g. GCSE Turkish) or specialist subjects (e.g. GSCE Music Technology). Cross-subsidisation takes a form of ‘parity pricing’, i.e. charging the same price for examinations across subjects irrespective of the underlying cost.

Our assessment of the market would predict that the current practice of cross-subsidisation is likely to be eroded over time. This is mainly because exam boards compete on a subject by subject basis with little portfolio effect (i.e. each subject is assessed by schools on its own merit and it does not matter whether an exam board provides less common subjects to be considered a credible provider of more common, higher volume subjects). The market is also competitive, which means that it will have at least a degree of efficiency and market based decision-making which cross-subsidisation is not. Finally, schools are currently price insensitive which would suggest that increasing prices should be possible, reducing the need for cross-subsidisation.

We understand from our discussions with exam boards that they mostly provide small, loss-making subjects for “public good” reasons, as they feel it is their “obligation” to do that. However, they are increasingly looking at ways to recoup the costs associated with these subjects. We understood that over time, exam boards would seek to increase the prices of these subject to recover costs. This was in line with our expectations. Most exam boards have already started increasing prices, although we were led to believe that prices do not as yet cover

all the costs for all small subjects.

In some subjects such as GCSEs in less common modern foreign languages, exam boards are considering discontinuing their provision altogether rather than increasing their price to cover costs. This is mainly because they feel that the “public good” argument is less clear in these cases. Exam boards in general felt that GCSEs in less common modern foreign languages could be seen as “easy wins” by native speakers of those languages. They also told us that the quality of examiners varied and it was very hard to achieve consistent, high quality marking.

From the perspective of an efficient market, these developments are not concerning – exam boards should be allowed to recover the costs of the product that they offer as well as not to provide certain subjects that they do not believe they can offer economically. However, DfE may take a view that some of those subjects are important for ‘public good’ reason and that high price or discontinuation would not be in the interest of society. In that case, economic theory suggests that a direct government subsidy may be less market distortive and more efficient than mandatory cross-subsidisation by exam boards.

Moreover, while the DfE’s focus to date has been on the smallest subjects, some of the exam boards suggested that middle-sized volume subjects which carry a large assessment cost may also face an uncertain future. These would be mainly popular modern foreign languages such as French, German and Spanish.

In both cases, small and medium-size subjects, DfE may want to see how schools react to paying a market price for examinations and consider a subsidy if it perceives that the number of pupils taking those qualifications falls below desirable levels. If this outcome is not acceptable as DfE would not be willing to tolerate that the numbers of pupils taking those qualifications fall below desirable levels for any length of time, DfE may want to model the impact of the price increase in these subjects on their uptake and consider a pro-active subsidy.

Finally, we note that the DfE has in effect implicitly granted a ‘subsidy’ to some subjects by developing their content. Exam boards will need to develop content for the remaining subjects. This will make exam boards incur additional costs for those subjects. We understand that this is likely to occur for some small subjects. Since these subjects are low volume, this move could make them even less profitable.

2.3.2 Possible further evolution of the market

75. While we thought that Scenario 2: Enhanced Status Quo was mostly likely to follow based on the evidence we have gathered and the way the market operates now, it is possible that in the longer term, the market will develop further. This is particularly the case given that:

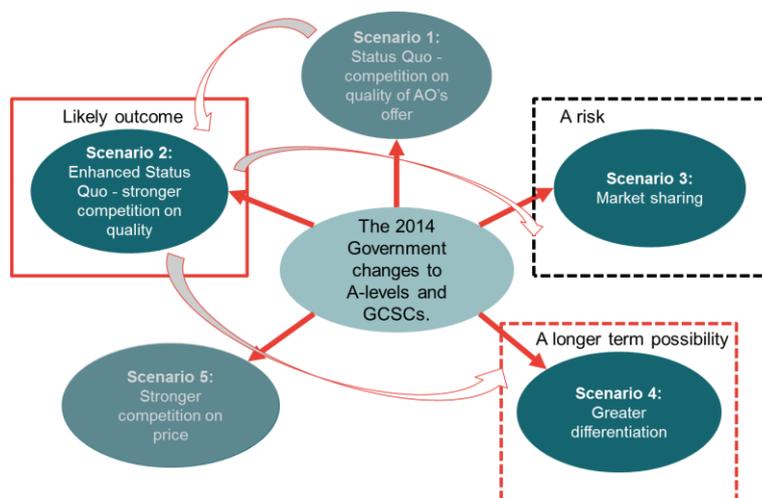
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- Scenario 2 is highly competitive and exam boards may not wish to compete so strongly in the future. Strong head-on competition will put pressure on margins and may induce exit.
 - Scenario 2 is based on a unified approach to the market by exam boards. However, schools are differentiated in their needs. Exam boards are starting to become alive to these issues and it is possible that they will reflect it in their product offer going forward, in particular if it will give them a degree of market power.
 - Schools are likely to face greater financial constraints in the future than they are facing now, making price potentially more relevant to their decision-making.
 - Ofqual increasingly standardises qualification specification. This reduces barriers to switching and makes the market for qualification more commoditised. This could facilitate coordination.
76. Based on these findings, we believe that in the long run, it is possible that the market will tip towards **Scenario 4: Greater differentiation** where quality will still be a leading factor but exam boards may create different offers for different types of schools based on their needs and price sensitivity.
77. However, there is also a small risk that standardisation and accreditation changes might create a market where the remaining exam boards will have an incentive to coordinate, i.e. the market will tip towards **Scenario 3: Market sharing**. The risk of this scenario might increase if WJEC were to exit the market as this exam board currently does not seem to have an incentive to coordinate with the others.
78. We believe that there is currently little evidence that the market for qualifications would change completely from competition solely on quality to competition solely on price, i.e. that there is little prospect of Scenario 5: Stronger competition on price materialising. We believe that in a world where schools face reputational repercussions of choosing the ‘wrong’ exam boards with parents of their pupils and their governors, price is likely to remain secondary to quality. However, this scenario could occur if Ofqual achieved complete standardisation and price remained the only factor on which schools can choose an exam board.
79. We also do not believe that Scenario 1: Status Quo will persist. The degree of exam boards’ preparations alone would suggest that the change in the competitive intensity will be stronger than it is currently. Having said that, given that none of the exam boards currently appears to be lagging behind the others in their understanding of the need for investment, it is possible that there will not be much change in market share since all exam boards will be equally prepared and switching would require at least one of them to be less prepared than others.

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Similarly, an exam board that has a small market share in a subject, say 5%, and that will succeed in doubling it post the GCSE and A-level reforms, will only have taken 10% of the overall market and thus not transforming the general outlook of the market significantly. See **Figure 4** below for a summary of our analysis.

Figure 4. Considering the likelihood of future market scenarios



Source: Frontier

The impact of the GCSE and A-level reforms and market scenarios

3 Regulatory risks and trade-offs

80. In this section, we look at the regulatory risks involved in the various scenarios. This analysis is based on our findings in the previous section suggesting that all of the modelled scenarios have at least some downsides and some, like Scenario 3: Market sharing, have only downsides. We therefore tried to identify key regulatory risks that Ofqual will encounter and highlight the potential regulatory trade-offs that it may need to consider.

3.1.1 Risk 1: Race to the bottom

81. Three of our scenarios assume competition on quality. Scenario 1: Status Quo and Scenario 2: Enhanced Status Quo assumes that quality is the only factor that will make schools choose an exam board. Scenario 4: Greater differentiation, assumes that schools have different needs and therefore potentially different requirements with respect to quality. In each of these cases there is a risk that exam boards interpret this as competition to offer the 'easiest' examinations. Exam boards may feel pressurised into offering easier examinations by schools which in turn may feel pressurised into requesting easier examinations by the evaluation criteria put on them by the Government.

82. Ofqual is currently regulating standards to minimise this risk. However, it will need to remain vigilant as this risk is intrinsic to competition on quality.

83. Another way to relax quality would be through greater predictability of examination questions. This is a risk that Ofqual is actively considering. If Ofqual wanted to assess this risk further, it could focus on the extent to which predictability conveys advantage to certain schools and pupils.

84. Finally, strong competition on price that would emerge under Scenario 5 might also lead to a race to the bottom on quality. This is because in a world where schools place most weight on price, the cheapest offer will win. Higher quality, higher price offers would therefore likely disappear in favour of 'no frills' offers. This type of race to the bottom would not necessarily have a negative impact on the standard of exams but would impact innovation and the offer of additional products such as teacher support websites.

3.1.2 Risk 2: Pricing strategies

85. Scenario 1: Status Quo and Scenario 2: Enhanced Status Quo assumes that schools will remain price insensitive, choosing exam boards only on the basis of quality. These scenarios therefore carry a risk that prices will increase over time.

86. Similarly, we identified a possibility that in the long run, the market moves towards greater product differentiation, a scenario that also may involve 'price hikes' in cases when exam boards create complex bundles of products whose prices are difficult to understand and compare.

87. In all three cases, Ofqual might be concerned that prices are ‘too high’. Assessing excessive pricing is notoriously difficult as it requires the regulator to make a judgment on what the appropriate price level is – something that markets are there to establish. However, in markets where this risk is real, the regulator may wish to undertake this assessment. This is generally done through the assessment of profitability rather than prices to avoid the spurious nature of ruling on exact price levels.
88. Given that schools did not complain about prices, it is possible that prices are currently not ‘too high’. However, our evidence is not sufficiently strong to rule this out. This is particularly the case given that schools are currently not focussing on price when selecting exam boards.
89. Conversely, if prices are considered ‘reasonable’, Ofqual could be concerned about exam boards’ viability since exam boards need to generate a positive margin to recover their fixed costs, including the costs of investment. If prices remain too low for a long enough period, this might induce exit of one or more exam boards or substantial price increases at a later date.
90. If prices were indeed ‘too low’ and schools were price insensitive principally because they were not concerned about the price at its present level, the schools may be giving a wrong signal that competition is taking place only on quality. If prices increased, this would change. While this is not a problem in itself, this behaviour would decrease the predictability of the market outcomes for Ofqual. Understanding how important the examination expenditure is for schools alongside an analysis of exam boards’ profitability might shed some light on this issue.
91. In general, we would not expect the effect of low prices to be too dramatic mainly because of the risk for schools of choosing an exam board mainly on price, but this risk cannot be eliminated until we understand whether prices are indeed too low across the board and schools therefore artificially price insensitive.
92. Finally, an analysis of profitability and the drivers of schools’ price insensitivity would allow Ofqual to understand better whether exam boards are operating at perilously low margins, schools are being over-charged, or neither of these two.

3.1.3 Risk 3: Bundling and product confusion

93. We understand from our discussions with schools and Ofqual that different schools face different challenges and may therefore have different needs. We understand from our discussions with exam boards that at least some of them are beginning to consider school segmentation seriously. If exam boards decided to adapt their offer to suit different school needs, the market would likely move to Scenario 5: Greater differentiation. We thought that this was possible in the longer term. We were, however, aware that there are already elements of the

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exam boards' offer which can be taken up by some schools and not others, and therefore that there is a degree of differentiation already.

94. Differentiation is on the whole positive, as it allows schools to be served based on their differing needs and gives exam boards scope to innovate. However, it also carries a risk that exam boards will use this opportunity to create confusing products and product bundles which will prevent schools from making meaningful choices, and therefore allowing exam boards to keep a greater degree of market power than would be the case if schools were able to compare products more readily. As we discussed above, there is also a risk that exam boards will segment the market for examinations by grades. This would allow both higher and lower standards of examination to co-exist.
95. Policing what is genuine innovation and what is consumer confusion is difficult as retail financial markets show. One way to understand whether differentiation leads to confusion is to monitor schools' understanding of the exam boards' offers.

3.1.4 Risk 4: Market sharing

96. We identified one unambiguously negative scenario that could occur in the future, Scenario 3: Market sharing. Coordination that underlies this scenario is difficult to overcome by regulatory action. The consecutive attempts of the energy regulator to address the problem of collusion or at least the perception of it once it has been alleged could serve as an example. The best protection against coordination is through a protection of market structure and features that are not conducive to coordination.
97. We identified three potential sources of risk. The first is 'commoditisation' of the market for qualifications through standardisation. This might increase the ability of exam boards to coordinate as the market becomes very transparent and therefore easier to coordinate in. Commoditisation would also increase the incentives of exam boards to coordinate as it increases comparability of their offers by schools and therefore increases the risk of switching and stronger competition.
98. The second source of risk is an increase in opportunities for exam boards to work together to develop common standards. This is likely to be the case for small subjects where the Government no longer wishes to set the standards centrally and where exam boards may be called upon to develop the specifications collectively.
99. We recognise that greater standardisation has important benefits for the market. In particular, it is a protection against competition on low standards. There is therefore a regulatory trade-off that Ofqual may need to consider between standardisation that goes too far and allows exam boards to coordinate and standardisation that does not go far enough and allows poor standards to emerge.

Ofqual may want to consider whether it has standardised those elements of examinations where competition on quality would be undesirable while allowing enough differentiating features to guard against coordination and protect innovation.

100. The third source of risk is the exit of one or more exam boards. Some exam boards might currently have an incentive to grow their market share. WJEC in particular might be incentivised to grow volume as it is relatively small and may need to recover its England-specific fixed costs. We discuss exam boards' exit in more detail below.

3.1.5 Risk 5: Exit of an exam board

101. Most of our scenarios predict competition between exam boards in the future. Scenario 2: Enhanced Status Quo – stronger competition on quality and Scenario 5: Stronger competition on price are intensely competitive scenarios. It is possible that this degree of competition will prove unsustainable for all exam boards in the future and will lead to exit by some of them. This is particularly likely if competition switches from quality to price.
102. Moreover, we found that exam boards are likely to have non-negligible fixed costs associated, among other things, with developing new specifications and marketing them to schools. We referred to this as an 'investment' period. At present, the recovery of these costs depends on the existence of a 'harvesting' period during which exam boards are able benefit from a reasonable degree of market stability and low switching. If reforms of qualifications happen too often, the harvesting period is too short and exam boards may not be able to recover their investment.
103. The GCSE and A-level reforms cut across all subjects and require therefore deeper investment than previous reforms and may therefore require longer period of 'harvesting'. We note that when we spoke to exam boards about this, some mentioned that it was important to them that the reforms were not implemented for all subjects at the same time but in a staggered fashion which gives them ability to absorb shocks more smoothly.
104. Exit of an exam board is not in itself a problem and can be seen as a natural evolution of a competitive market, in particular if it takes place as a result of a competition process. However, there is a risk that it will bring a change in market structure which may tip the market from a competitive one to a collusive one. This could happen following the exit of a small but growing player like WJEC or the exit of WJEC and another exam board.

3.1.6 Risk 6: Co-existence of scenarios

105. Finally, while we suggested that it is currently likely that Scenario 2: Enhanced Status Quo is the most likely, it is possible that the future will be more complex

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with several scenarios co-existing. This would be particularly likely if exam boards adopted a strategy of differentiating between school types or Ofqual took a different approach to different subjects.

106. For instance, subjects with greater degree of standardisation might lead to exam boards coordinating on quality by slowing down their improvements to their offers. Similarly, in smaller, less profitable subjects, exam boards might decide to divide the market between them by strategically exiting the provision of some subjects. In some subjects, such as those with high volume which are reasonably difficult to standardise, e.g. English Literature, competition on quality might continue, while competition on price might emerge in small subjects. Schools may offer easier exams for grade C within the same product that offers high quality grade B, A and A* examination. It is also possible that tighter budgets would lead to exam boards developing 'no frills' products for very price sensitive schools and competing fiercely on price on those products.
107. Co-existence of scenarios would mean that several, seemingly incompatible events, such as competition on quality and relaxation of competition on quality, price wars and price hikes, occur at the same time. This brings regulatory complexity as well as a need for Ofqual to multiply its responses to target the various causes of concern.

3.1.7 Conclusion

108. While all the above mentioned risks are possible, we did not uncover evidence pointing to any of these risks materialising or about to materialise. We also consider that it is in Ofqual's power to pre-empt these risks or at least limit their effect by appropriate regulatory intervention. These risks are therefore better seen as 'pointers' for future regulatory interest than a significant threat to the market calling for immediate action.

4 Candidate areas for further investigation

109. Ofqual asked us to identify the areas which we think it would benefit from further investigation. We have identified a number of such areas. The list that follows should not be seen as a suggestion that there is ‘problem’ that requires regulatory intervention, but that there is a potential for concern which can only be eliminated by further research.

110. These areas are:

- **‘Quality’:** Both our research and the Opinion Leader survey suggest that different elements of ‘quality’ or non-price offer are key to schools’ decision-making. Both sources also suggest that the suitability of the syllabus is the key element of quality. It would be helpful to understand what exactly this means and which aspects of ‘quality’ of the syllabus schools actually value and why. This might help Ofqual determine whether competition on quality is desirable or not.
- **‘Predictability’:** There are different aspects of predictability of examinations, some good, some potentially problematic. It might be useful for Ofqual to set a framework for assessing which aspects of predictability belong to which category. We identified potential concerns about comparability and fairness which might a useful framework when assessing the different facets of predictability.
- **Innovation:** We concluded that the market appears to be functioning well and that exam boards are competing on quality and innovation. However, it was not always clear to us what form such innovation takes or whether Ofqual is satisfied with the level and quality of innovation in the market. It might be helpful to investigate this issue further. Again, this would help Ofqual understand whether competition in this market is delivering benefits.
- **Importance of the costs of examinations for schools:** The smaller the proportion of these costs, the larger the scope for exam boards to increase their prices. Conversely, the larger these costs, the smaller the price increase needs to be to become problematic for schools’ budgets. In both cases, it would helpful to confirm the importance of these costs to schools.
- **Increase of schools’ expenditure on qualifications:** The Opinion Leader survey suggests that schools’ expenditure on qualifications has increased. It would be helpful to understand what has driven that increase, whether it was schools’ behaviour such as ‘double entries’ or increased appeals (i.e. increase in volume of activity), or whether this was due to price increases. Both answers would provide Ofqual with valuable insights into how the market

functions. If, for instance, the increase in expenditure was volume driven, Ofqual may want to understand more about whether this is because marking has worsened or because parents' or schools' behaviours and expectations have changed. Similarly, a price increase may be driven by market power but also by an increase in underlying costs.

- **Exam boards' cost structure:** We considered that a proper understanding of exam boards' cost structure would provide a clue to the type of competitive interaction and market outcomes that we are likely to see. For instance, if as we suspect exam boards have large fixed costs, Ofqual may be less concerned about high margins as these are needed to recover those costs. Consequently, Ofqual may be less concerned about higher prices. We believe that further work on this would be helpful in particular given that exam boards did not necessarily agree with our conclusion that they had large fixed costs.
- **Profitability:** We have found that despite the incentive to increase prices (given by schools' insensitivity to prices), exam boards do not appear to have increased their prices to the maximum we would expect. However, this would need to be verified. Understanding exam boards' profitability would help Ofqual understand whether exam boards are enjoying increasingly comfortable returns or running at perilously low margins. The former would suggest that schools are being overcharged while the latter would raise the flag of a possible exit of an exam board. An exam board exit would lead to further market concentration and potential reduction in competition.
- **Standardisation:** We understand the beneficial aspects of standardisation of exam board provision in the form of comparability of qualifications. However, we have identified a risk that this might, under certain circumstances, lead to market sharing between exam boards. Ofqual may also need to investigate the degree to which standardisation removes the opportunity for exam boards to innovate or differentiate themselves.
- **Differentiation:** We believe that schools are very different in their needs and requirements. However, for the reasons of comparability, qualifications are set at the same standard. There is a tension between the ability of exam boards to respond to these differing needs and the ability of Ofqual to ensure that qualifications are comparable. Ofqual may want to understand these differences further in order to understand the scope for and impact of differentiation of the exam boards' offer.

Candidate areas for further investigation

Annex 1: The list of interviewed organisations

We interviewed all four major exam boards providing qualifications in England. We also interviewed a small number of schools selected based on the criteria set by Ofqual to represent a cross-section of the different types of schools. We also interviewed two representatives of the university admission process. The names of the organisations we interviewed can be found in **Table 1** below.

Table 1. List of interviewed organisations

No.	Organisation type	Organisation name	Further description
1	Awarding organisation	AQA	a charity
2	Awarding organisation	Edexcel	part of the Pearson Group
3	Awarding organisation	OCR	not for profit, part of Cambridge University
4	Awarding organisation	WJEC	not for profit, qualifications in England to be provided under the brand Eduqas
5	university admissions	SPA	promotion of fair admissions and access to higher education
6	university admissions	UCAS	university application services
7	Examination centre	Bedfordshire East Multi Academy Trust (BEMAT) representing Gothic Mede Academy, Gravenhurst Academy, Etonbury Academy, Robert Bloomfield Academy, and Samuel Whitbread Academy	academy; outside London

8	Examination centre	Haberdasher's Aske's Boys School (Elstree, Hertfordshire)	independent; with a mix of IGCSEs and GCSEs but largely A-levels in 6th form
9	Examination centre	Plashet School for Girls (London)	maintained, not an academy, inside London, GCSEs only
10	Examination centre	Reading Boys School (Reading)	selective school
11	Examination centre	Westminster Kingsway (London)	FE college

Annex 1: The list of interviewed organisations

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