

Customer views

Introduction

1. The views expressed here are the views of users and purchasers of microscopes. The views were expressed to the CC in response to the CC's questions (see Annex 1), the CC's issues statement, in hearings, or simply in response to the referral to the CC of the acquisition by Carl Zeiss of the microscopy business of Bio-Rad. Selected views can be found in Annex 2. The views are not those of the CC. Publication of these views does not mean that the CC accepts their accuracy or validity. They are published in the interests of transparency.

UK customer views¹

2. In general, customers accepted the market diagram as described in Annex 1 as a reasonable representation of the market as it currently exists. Some questions were raised as to the treatment of computer aided systems which may be better aligned with the optical section and split between optical and non-optical in general. For example, computer image enhancement techniques can be used in conjunction with confocal (optical sectioning) systems.
3. All the customers questioned use Advanced 3D Light Microscopes ('systems') for analysing living cells and fixed and stained cells.
4. There was a good deal of consistency in the responses on what characteristics of the systems were important.

¹The CC received comments from 18 customers in the UK. Fourteen customers replied to a list of questions that were sent to them as detailed in Annex 1. In addition the CC has had comments from more than 20 overseas customers.

- Customers told us that the most important characteristic was that the system was suitable for the job that was required of it. Customers describe this in a number of different ways such as innovation, when it led to a better functioning system, functionality or suitability.
 - Following suitability came reliability, service, quality and price. Customers were less consistent as to how they would order these attributes but generally reliability was ranked above price.
 - Only one customer mentioned the ability to upgrade the system as an important factor when purchasing.
 - Only one customer explicitly mentioned the relationship with their current supplier; however, many customers talked about their past experience with suppliers as a reason to purchase their most recent system.
 - One customer also disliked having very innovative products as it felt that these products often did not do as promised and that there were more technical problems involved, which it described as beta testing.
5. Most customers had one to two years of servicing included in their purchase and had annual service contract after that.
- The systems were expected to last for ten or more years.
 - There were no customers who had a contract with an independent service contractor, and it was mentioned that if anyone other than the company service engineer worked on the system the contract would be invalid.
 - Service contracts generally cost in the region of £8,000 to £15,000 a year per microscope system.
6. Zeiss, Bio-Rad and Leica were mentioned most often as competitors and as the companies considered in the customers' last product purchase.

- Zeiss and Leica were believed to have similar prices and generally thought to be expensive. Zeiss and Leica made complete systems which made it difficult for the customer to add to their current equipment; it also lessened design flexibility and reduced the ability for customers to purchase parts more cheaply from other suppliers.
- Bio-Rad was seen as being cheaper and more flexible in terms of hardware, which offers the customer more flexibility in system design.
- Views on service were more mixed though in general Zeiss and Leica was felt to have good service levels.
- Olympus and Nikon were generally mentioned as competitors, though there was less customer knowledge about their products. They were both thought to provide cheaper products than Zeiss or Leica.
- Other competitors mentioned include, Ultraview, Delta vision, VisiTech and Perkin-Elmer (though Perkin-Elmer was believed only to market spinning disc systems).

7. Many customers believed that a merger would result in a lessening of competition, however some also pointed to potential benefits.

- Customers that mentioned price, stated that the loss of Bio-Rad would probably cause prices to rise as Zeiss would have less competition—however, it was acknowledged that this would depend on Leica's reaction to the merger.
- Customers tended to believe that the loss of Bio-Rad would also result in an increased bundling of goods and services which would lead to more constricted system design.
- However, some customers felt the merger would result in better service and higher quality products and hence supported the merger.

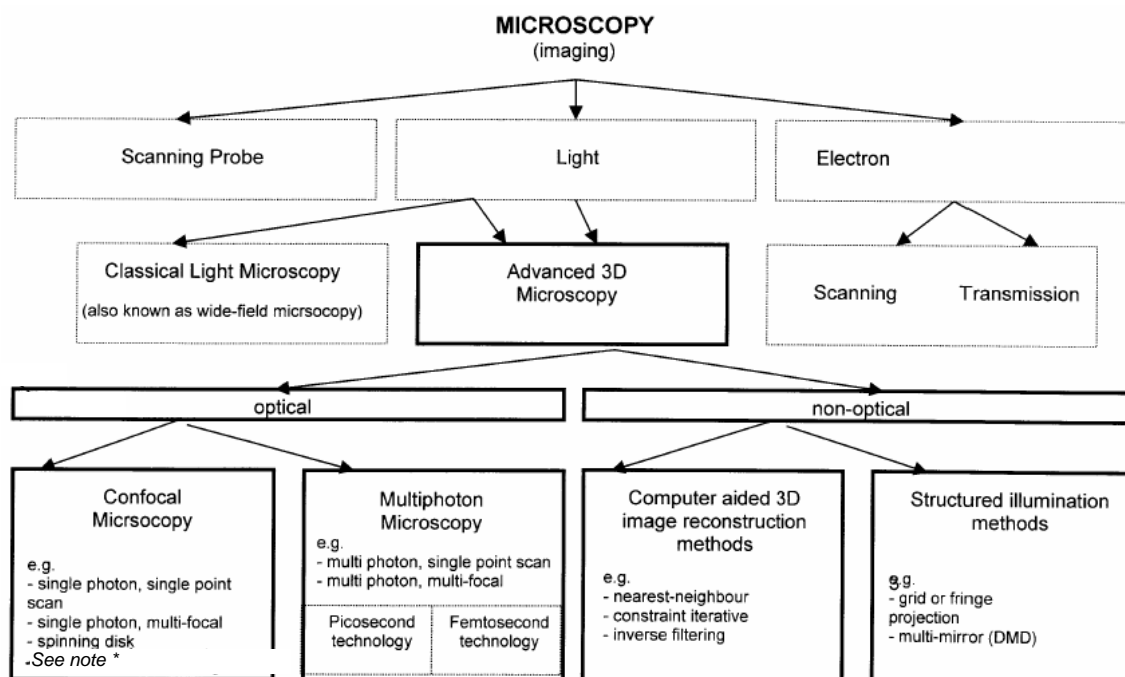
8. Some customers split the market into confocal and multi-photon systems in which they felt the merger would have different effects.
 - The result of the merger in the multi-photon market would result in a greater lessening of competition than in the confocal market as the patents would give greater protection against competition.
9. The overall effect on customers would depend on Zeiss's intentions post merger.
 - In particular customers mentioned servicing, R&D spend and the continued availability of Bio-Rad's product line.

Overseas customer views

1. Concerns were based around the following issues:
 - The continued support of Bio-Rad equipment, customers believed that support would be minimal and that replacement parts would be unobtainable as Zeiss would not be interested in maintaining Bio-Rad systems.
 - The perception that prices and servicing costs would rise as competition was reduced.
 - The perception that Zeiss would reduce R&D spending to pay for the merger and because they would have less incentive to spend money on development.
 - The perception that Zeiss would have a more powerful position in the multi-photon market, as it would be the sole licensee of the Cornell licence and would have the resources to enforce the licence. In addition, the Leica solution was generally believed to be inferior and was not widely adopted.
2. In general there was also a wide appreciation and respect for the Bio-Rad team. They were seen to have made a great contribution to the industry in terms of innovation, research and ability to work with customers. CellMap as well as the

multi-photon system were widely commented on as being innovative and as having many advantages for customers.

1. Please see the diagram below classifying all Advanced Microscopy products. Could you say whether you think this is a correct classification and if not, how you would classify the products. Please provide full details of which products your organization currently owns, including their manufacturer (indicating where major portions, for example the laser, are made by a different manufacturer), the model, and the date of purchase.



*We consider 'multiphoton ready' confocal microscopes that are enabled for upgrade to multiphoton capability in the confocal category, unless they have been upgraded.

2. Please show for each type of product, both for the advanced 3D microscopes and any others you own, the applications to which it is suited (for example, mineral analysis, living cells), and, to the degree possible, indicate how interchangeable the products are. In addition, if any of your current microscope(s) are used for applications that they were not originally bought for, or are used for multiple applications please provide details.

3. Please describe the factors which you think are important when purchasing an Advanced Microscope (for example, price, installation and service support, product characteristics, reliability, innovation etc), to the degree possible please rank these factors in order of importance to you.
4.
 - (a) Please give us a detailed account of the process of selection and negotiation for each of the Advanced 3D Microscopes you have bought in the last three years, including the short list of products you considered with reasons, the offers and any counter-offers made by manufacturers, and the reason for your final selection.
 - (b) Please also outline the process of applying for the grant to finance each microscope if applicable, and explain the terms of the resultant budget for the microscope (for example, how tight the specification is, can money saved be spent on something else)—it would be helpful to see the relevant section of the contract with the funder.
5. Please outline the main characteristics of the service/on-site maintenance that you receive for your Advanced Microscopy products, say whether such service is automatically included or charged separately, and give an indication of the cost and expected life of a service contract.
6. Please provide details of what in your opinion have been the significant technological developments in Advanced Microscopy in the past seven years? Do you anticipate (with an indication of the degree of confidence) that there will be any further significant developments by you or other suppliers in the next five years?
7. Please provide details of all those companies that you regard as competitors in the supply of Advanced Microscopes?

- For each current competitor, please describe how competitive it is in terms of price, quality of service and any other relevant factors?
 - How has this situation changed over the past seven years and what are the reasons for the change?
 - How will the situation change over the next five years?
8. Do you believe that the proposed merger could substantially lessen competition in the UK? If so could you please detail what you believe to be the likely effects?

Selected views

The market

1. Currently, scientists are free to choose from several suppliers for Advanced 3D microscope systems. This acquisition will remove Bio-Rad, one of the major suppliers, giving Carl Zeiss an unhealthy dominant market share position resulting in a serious lessening of competition.
2. The single photon system supplied by Bio-Rad has an advantage for many groups in that it is modular allowing the confocal head to be fitted to a number of makes of microscope. This has the benefit for the purchaser in that these microscopes are often cheaper than those supplied by Leica or Zeiss. With the confocal systems of Leica or Zeiss only the microscope of the manufacturer can be purchased with the subsequent effect on price. The market at present is competitive and to achieve an edge there are constantly new developments by the manufacturers—all of which is a benefit to the purchaser.
3. During the tendering process, which precedes any academic purchases of such system, Bio-Rad has a reputation for providing highly competitive tenders; this has the effect of making the tenders from Leica and Zeiss equally competitive. The loss of the Bio-Rad system from the market may well cause (is likely to cause) an increase in the pricing of such systems. This will affect those providing research funding, for example BBSRC, MRC etc as higher funding would be sought.
4. Although the Medical market is currently dominated by Bio-Rad, the value of such products ensures that both Leica and Zeiss are intent on becoming significant

players in the market. Eventually, with new developments, one of these two companies would make advances that would lead to the attractiveness of their system for researchers, and the market would swing and a more competitive arena would develop (as is seen in the confocal market).

5. By reducing the players in the market (from three) to two, particularly two companies that have a reputation for being expensive, clearly lessens the competitiveness of the market. In addition, it will render obsolete a large amount of very expensive equipment.
6. Bio-Rad has a significant market share (in multi-photon confocal microscopy) due to its patent on laser use. This has resulted in a market in which Bio-Rad has a competitive edge, and indeed, by law, others cannot compete on the same level. The market is therefore less competitive at present.
7. If Bio-Rad prevents Zeiss from using the patent on the lasers, then the market will heavily tip towards Leica, with Bio-Rad software and applications lagging behind. This (multi-photon) market is not as significant as that of single-photon microscopy, and so any judgements should be carefully assessed with regards to all instruments.
8. The largest worldwide market share for multi-photon excitation microscopy in the academic biomedical microscopy segment is by 'DIY', that is by academics modifying or building their own scanning microscopes.
9. Bio-Rad was the first company to offer a practical and usable confocal microscope and, as such, has built up a huge installed base. These customers will be severely disadvantaged if they are unable to maintain their instruments.

10. Multi-photon imaging was hailed as a major development but has not delivered as much as expected, except with specific applications in intact tissues.
11. The Bio-Rad system (an add-on to a microscope from a third party supplier) allows flexibility of choice of optical components. This is an important option which in many cases will lead to cost savings, and should be maintained if possible. Under Zeiss ownership, it seems unlikely that the Bio-Rad alternative will be available on non-Zeiss optical platforms unless specific conditions are imposed on the company.
12. The merger will reduce competitiveness in the field of confocal and multi-photon microscopy. If the merger is technological rather than just business or financial, then Zeiss will be in a position to produce an outstanding product, having the best of both current systems. Leica will have difficulty competing in the market unless Zeiss maintains its usually high prices.
13. The loss of Bio-Rad will be unfortunate given that it has been a major player in the development of confocal from the beginning, and it has always provided good quality equipment at competitive rates.
14. Bio-Rad systems cost less and can be fitted to any brand of microscope. Furthermore, Bio-Rad sells other types of microscope/systems that are different to Zeiss, and it is not clear what will happen in the case of these other systems if the merger takes place.
15. Bio-Rad by far provides the best service support/on-site maintenance over both Zeiss and Leica in Scotland.

16. By removing one of the most competitive players in the market, there will be less incentive for new development. Microscopists depend on these developments to fuel their new discoveries.
17. If the merger is allowed to proceed, there is a danger that the new company will be the only one allowed to sell femto-second lasers (which are necessary) with laser-scanning microscopes. This might lead to a monopoly, which would be detrimental to advancement and to innovations in the field of confocal and multi-photon microscopy. Whilst not objecting to the merger, it was strongly suggested that Zeiss may be obliged to license the multi-photon patent to other companies. This would be an advantage to all customers.
18. Bio-Rad has offered original engineering solutions and competitive commercial solutions without compromising the scientific capacity to generate excellent results. Zeiss on the other hand are, and always were, substantially more expensive without offering any additional scientific added value.
19. Bad management decisions taken by the UK arm of Bio-Rad may be a contributing factor in the present situation. It is obvious that Bio-Rad in the UK is in need of a profound commercial and operational restructure.

Competition

1. The proposed acquisition should not be allowed to proceed on the grounds that it will significantly diminish competition in the UK for Advanced 3D microscope systems for Biosciences research.

2. The merger will probably lessen competition in the UK. In particular, the possible removal of cheap, yet innovative, personal confocal from Bio-Rad could increase prices for personal confocal instruments. Competition in top-of-the-range two-photon instruments could also be lessened.
3. The merger will lessen competition. Zeiss and Bio-Rad are the market leaders and the merger could very easily lead to a situation where one major player could out-compete the minor suppliers. It is unclear what effect the loss of competition in the multi-photon market would have on costs—although it is difficult to imagine that this could be an advantage to the end user.
4. The loss of Bio-Rad to the single-photon market will not substantially lessen competition. It would be surprising if Nikon or Olympus did not increase their market share of this market as a result. It will hopefully enable them to become more competitive within this market and so increase competition and raise awareness to other manufacturers which are often overlooked.
5. There appears to be considerable overlap between the products made by Zeiss and Bio-Rad. An obvious result of the acquisition would be the capture of Bio-Rad's intellectual property and the closure of the UK business.
6. There is a danger that the proposed merger could substantially lessen competition in the UK.
7. There may be loss of local competition in the UK and subsequent price rises.
8. The merger will significantly reduce competition and hence the choice available to customers. If Zeiss were to acquire the Bio-Rad business, the result would be an

effective monopoly of the most desirable technological approach. Zeiss would therefore have undue control over the supply of product and pricing.

9. The quality of the Bio-Rad microscopy team in the UK, and the competition between Bio-Rad and other manufacturers, has meant that all laboratories in the western world in the field of life sciences now have access to laser scanning imaging systems.
10. For single-photon, Bio-Rad Radiance and its spectral imaging system, Rainbow, offer alternative competitive instruments to the Zeiss LMS 510 Meta system, and therefore the acquisition would remove one of the competitors from the market. There are a number of competitors for one-photon systems, and therefore this may not be a serious situation. There are fewer spectral imagers and this would reduce competition here, albeit for a small market. The Meta is a sufficiently innovative spectral imager that it should satisfy most users.
11. Zeiss's motivation for the merger is twofold: to acquire the worldwide patent for two-photon microscopy, and to eliminate a competitor. Both of these developments would have a deleterious effect on competition.
12. Customer X, based in the USA is opposed to the merger on the grounds that a decrease in the number of confocal microscope companies will lead to higher prices and a severe decrease in microscope service. The service provided by Zeiss in the USA has been poor, whereas Bio-Rad provides an excellent service. The merger will have a detrimental effect on the progress of, and the cost to, British science, and will have the same negative impact on US science.

13. The merger would lessen competition and could impair the service offered to UK users. Zeiss was believed not to provide as good a service as that offered by Bio-Rad, and therefore, the use of Bio-Rad engineers to double with Zeiss would result in reduced service capacity.
14. The proposed merger could substantially lessen competition in the UK, because of a number of factors, including:
 - (a) During the procurement process, the customer is able to compare directly the tenders suggested by Bio-Rad and Zeiss and choose the most suitable offer. A merger would withdraw this choice.
 - (b) To achieve an optimal design for experimental purposes, the customer has been using Bio-Rad systems integrated with Olympus microscopes. There are doubts that the new company would have the flexibility to provide the choice of microscopes other than Zeiss.
 - (c) In negotiations with Bio-Rad, the customer was able to choose individual system components without the necessity to purchase the completed multi-photon system. It was not clear whether Zeiss was able to follow a similar line of negotiations.
15. The merger will reduce competition, particularly as competitive tenders always bring in large price reductions over the initial quote. There is a fear that Zeiss is simply interested in acquiring the Bio-Rad confocal technology and patents rather than continuing production of Bio-Rad instruments in competition with its own 510 confocal systems. It is unlikely that Zeiss would keep both product lines going, as they are based on very different software and components.

16. Concern was expressed that the merger will reduce competition in the UK. For some types of instruments there is no real competition as it stands (for example, Perkin-Elmer system), and this leads to difficulties in securing a competitive and affordable price. Having only one company that can tender for particular equipment is generally undesirable, although this is increasingly common for high tech products.
17. Should the merger result in the loss of Bio-Rad confocal from the marketplace, the loss of competition would be detrimental to the final users of these systems, as it risks pushing up prices while not delivering any extra improvement in available equipment. If either (a) these systems are retained or (b) Zeiss becomes more flexible in the systems that are offered, the potential effects of reduced competition can be minimized.
18. There will be a substantial lessening of competition within the confocal/two-photon microscopy market in the UK if Bio-Rad disappears. Both types of microscopy are rapidly developing and many of these developments and innovations are being driven by competition. It would therefore be highly undesirable to lose this competition.
19. By acquiring Bio-Rad, Zeiss can avoid legal challenges from Bio-Rad. If Zeiss does acquire the licence, a major problem could arise if it prevented Leica from developing multi-photon microscopy which would remove all competition from manufacturers of multi-photon microscopes.
20. Bio-Rad has recently introduced a new, low-cost confocal microscope, Cell-Map, which is about one-third of the cost of a full-featured microscope. It is the only manufacturer to succeed in this market which has hitherto been the exclusive province of Japanese manufacturers. If Zeiss were to end production of this system,

or to increase the price to an uncompetitive figure, this would lead to a real loss of competition.

Innovation

1. Clearly, scientific discovery is limited by the availability of the tools of science, and a healthy competitive environment is required to foster product development, which enables technological innovation and ground-breaking research.
2. Zeiss already has a significant share of the confocal market and it was highly unlikely that it would continue to develop the Bio-Rad Radiance series, indeed it would be more likely to cease production. This would clearly limit the choice for potential purchasers and would lead to a steady increase in the cost of such systems.
3. Zeiss has a commitment to product design, technical innovation and customer satisfaction in the field of AMPs that will bring benefits to users of AMP. A larger market share, with its economies of scale, may allow Zeiss's products to be sold more cheaply thus giving more users greater access to high quality products and service.
4. Loss of the new Bio-Rad microscope technology (by sequestering the Bio-Rad IPR) would be detrimental to basic science research.
5. Although the loss of any commercial entity in this business segment is disappointing, the fact is that academic and corporate customers have plenty of choices available. Zeiss, Leica, Nikon and Olympus manufacture and sell a diverse range of confocal laser scanning microscopes, Optem Intel's OptiGrid and Zeiss's Apotome represent an alternative optical sectioning methodology, digital micromirror devices for optical

scanning and patterned photoactivation/photobleaching should come on the market next year, and digital convolution instruments and software packages from Applied Precision, Bitplane and others provide alternatives to confocal and multi-photon microscopies.

6. The result will be a loss of technology innovation in a UK company, the transfer of UK jobs to Germany, and a destabilization for UK high technology users for some time to come.

7. Not only has Bio-Rad manufactured the first confocal system, but it has constantly been leader in development and innovation as evidenced by the recent example of the multi-photon system, which Bio-Rad was first to release on the market. All other manufacturers have been followers. It is important to note that both Zeiss and Leica are major companies in the manufacture of optical systems, and in particular conventional microscopes. Virtually all laboratories in the world are equipped with elements from either one of these two companies. This enormous commercial power enables them to improve systems based on ideas originally formulated by Bio-Rad. This in turn has pushed Bio-Rad to continuously improve its innovative effort. This equilibrium has permitted the considerable evolution of systems in the last ten years and the reduction of prices of basic systems.

8. Bio-Rad has recently introduced a new, low-cost confocal microscope, Cell-Map, which is about one-third of the cost of a full-featured microscope. It is the only manufacturer to succeed in this market which has hitherto been the exclusive province of Japanese manufacturers. If Zeiss were to end production of this system, or to increase the price to an uncompetitive figure, this would lead to a real loss of competition.

9. Zeiss's track record for innovation and intelligent implementation of technology is far superior to that of Bio-Rad. The incorporation of multi-photon technology into the Zeiss machine will make it very desirable.

Patent issues

1. As regards the MPM business, Bio-Rad presently has by far the major share with Leica making steady inroads into the market. Zeiss has had less of an impact. This was in part due to the extensive nature of the original patent on the technologies taken out by Bio-Rad, which are favoured by most researchers. Since the current market has only one major player, Bio-Rad, and two smaller players, Leica and Zeiss, the market is currently not as competitive as it could be. However, whether Zeiss purchasing the MPM business would increase the competitiveness of the market is questionable.
2. Acquiring the rights to Bio-Rad microscopy patents will, no doubt, improve the technology that Zeiss offers, and hopefully including the ability to retrofit AMPs to existing non-Zeiss microscopes. Should this latter aspect of the Bio-Rad business not be supported then it would likely disadvantage some present and future users. Zeiss may have to enter into third party agreements with other microscope manufacturers to maintain hybrid AMP systems comprising Zeiss and non-Zeiss components. However, experience of such hybrids is positive: Universal Imaging UK (previously Roper Scientific) provide epifluorescence imaging hardware/software for use on Zeiss microscopes, and a close relationship operates between the two companies. It is not too much of an expectation to believe that other collaborative efforts could be fostered in the interests of promoting advanced microscopy in the UK.

3. The academic DIY segment will remain unaffected by whoever holds the licence for the Cornell University patents, but will benefit from the end of uncertainty in the business climate and by the increased rate of placement of multi-photon lasers once litigation ends.
4. For multi-photon, Bio-Rad has the patent on femtosecond two-photon imaging and therefore there is no competition. The rationale for Zeiss's acquisition of Bio-Rad's microscopy business is to acquire the patent rights for multi-photon, femtosecond style.
5. Access to patent rights appears to be the sole basis for Zeiss's takeover of Bio-Rad. Zeiss has significantly more financial resources than Bio-Rad, and if it were to acquire the patent rights and follow a similar strategy of declining to issue licences it will be in a much better position to create a monopoly. Multi-photon is such an important part of the market that confocal manufacturers unable to offer this technology will inevitably be marginalized. It is vital that if the merger is allowed to proceed it must be on the basis that Zeiss will agree to licence the multi-photon patents at a fair rate to other manufacturers. Otherwise, there will in effect be only one manufacturer within a short time following the merger.
6. The main reason Zeiss is buying Bio-Rad is to acquire the multi-photon patent. The patent secures the use of a certain type of laser light with a confocal or any point-scanning laser microscope. In recent years the restrictive and protective behaviour of Bio-Rad concerning the patent has prevented competition and investment in R&D by other companies. Some smaller companies had to stop production of multi-photon microscopes because they were not allowed to sell them. Leica, for example,

circumvented the patent by selling pico-second lasers with its systems, which are covered by a different patent.

New entry

1. From a commercial point of view Bio-Rad may wish, or need to, sell its 3D microscopy business. The purchase of the 3D microscopy business of Bio-Rad by other manufacturers, for example Nikon or Olympus would maintain the current competitiveness in the field and would be of benefit to the research communities. The purchase of the 3D microscopy business of Bio-Rad by Zeiss (or for that matter, Leica) would have the reverse effect and will result in a substantial lessening of competition within the market.
2. If Bio-Rad products were sold with Zeiss aftersales care then this would be good for AMP in the UK. The advantage of Bio-Rad was that its AMPs could be retro-fitted to most microscopes regardless of manufacturer, which could reduce the cost of an AMP. The other AMP companies require the use of their own microscopes.
3. Japanese competition is strong and the only remaining European competition would come from Leica. This creates a two horse race in Europe, and small emerging companies would be unable to make an impact.

Benefits of the merger

1. A merger of Zeiss and Bio-Rad could see many benefits, including new companies forging into the top brand market, and likewise, not to see Bio-Rad run into the ground and disappear with the loss of many jobs. From a UK perspective, it was hoped that the acquisition would see many Bio-Rad staff stay in the UK and carry on developing new and innovate instruments and applications. As a UK-based scientist,

it is much easier working with a company within the same country rather than with a company abroad. By not allowing the merger there is a fear that much of this service will be lost forever, and be of no benefit to anyone.

2. Inevitably the merger will lessen competition, but it may also allow Zeiss to make a better product, which will also be good for the consumer.
3. The merger could also have positive effects as the best parts of both Bio-Rad and Zeiss could be combined to produce an advanced microscope that is better than either alone, and possibly also more affordable than the most expensive one is currently. The service arrangements for any such combined instrument should be guaranteed, and it should be UK-wide with acceptable charges. Following a merger it is essential that local service is continued as much as possible.

Disbenefits

1. The purchase of Bio-Rad by Zeiss will result in a monopoly of high technology optical systems in the UK. Prices will rise, current UK Bio-Rad instrument owners will become 'scientific pariahs' in the very country that developed the technology, and the ability of UK scientists to influence future enhancements in the field will be essentially zero.
2. If the merger is approved, it would probably mean the loss of technology, rare skills and jobs in the UK. Zeiss would almost certainly close the Bio-Rad facility at Hemel Hempstead and move activities to one of its plants in Germany. This would be a particularly unfortunate loss because the technologies developed, manufactured and marketed by Bio-Rad's Microscopy Division address important and rapidly advancing fields of science. There is little doubt that these are enabling technologies which will

contribute to future advances in cell biology, proteomics, developmental biology, neuroscience and physiology.

3. There will probably be damage to the symbiotic relationship that exists between Bio-Rad's Microscopy Division and the MRC Laboratory of Molecular Biology, Cambridge and the UK scientific community in general. Science-driven businesses such as this feed off the innovation that comes from scientists extending the applications of technology. They also enable new science by putting new capabilities into the hands of scientists. Two-way relationships of this kind between innovating technologists, often in academic laboratories, and commercial enterprises provide motive power to future scientific progress. If the proposed merger is allowed, it is likely that much of this synergy would be lost to British science since Zeiss would probably focus its relationships on institutes in Germany.
4. It would be helpful to know whether service contracts will continue to be available for the Bio-Rad instruments already purchased and, if so, for how long. If the service contracts were lost, it would only be a matter of time before the instruments broke down and the investments in them were rendered worthless. Zeiss has not always been at the cutting edge of confocal microscopy; its early instruments were complete disasters—very long on marketing and very short on engineering.
5. A merger between CZ and Bio-Rad would be a major drawback, not only for the industry, but for life sciences and medical research worldwide.
6. Having invested heavily in Bio-Rad equipment there is a concern that the Bio-Rad instrument will become 'a boat anchor' since Zeiss will no longer advance Bio-Rad technology after the three- to five-year ISO period. This would also give Zeiss a monopoly of multi-photon in North America.

7. Following a merger, it is highly unlikely that Zeiss will continue to service existing Bio-Rad equipment, let alone manufacture replacement parts. As a result, large sums of government research money that has been invested in this equipment will be lost, and only those who can afford it will be forced to buy new machines. Any benefits derived from the merger will be at the direct expense of individual scientists, government agencies and medical research in general.
8. The service provided by Zeiss has been very poor. It would expect Zeiss to charge exorbitant fees for service, and there would be difficulties in obtaining any help from Zeiss, even when paying its prices.
9. The advanced Bio-Rad patents must be a major factor in Zeiss's desire to acquire the business, but if the merger were to result in a loss of the Bio-Rad R&D capacity, it was felt that this would reduce the competitive drive for technological advance. However, if Bio-Rad were to become insolvent the loss would be greater.
10. There is a concern that Zeiss will not provide the same level of service and product support for existing Bio-Rad systems.
11. It seems that Zeiss has most to gain from the merger by eliminating a major competitor. The merger is bound to force up prices as Bio-Rad's confocal microscopes appear to be relatively cheaper than those of Zeiss.
12. A major concern of Bio-Rad users is whether service support of Bio-Rad confocal/two-photon microscopes would suffer following the merger. It is very unlikely that Zeiss service engineers could provide the necessary support, especially in the light of their very poor past record with their own microscopes in Scotland.

13. The microscope systems of Zeiss, Leica and Bio-Rad differ in fundamental ways. The design and implementation choices made by the manufacturers mean that each system has a set of advantages and disadvantages that make it more or less suitable for different classes of experiments. This is particularly true for the multi-photon microscopes. Losing this variety will stifle research progress and slow improvements in humans' health.
14. The merger brings no advantage to the market, or to biological research in general. The only positive outcome will be for Zeiss, which will not then face a lawsuit filed by Bio-Rad for patent infringement.
15. The proposed merger should be examined with an eye to asking seriously what benefit this will bring to biomedical research, and ultimately the public's health. On these two counts, the only possible conclusion is that the merger will do harm to both.
16. Is concerned that Zeiss would discontinue the Bio-Rad product line and not provide proper support for those users of Bio-Rad systems. Zeiss does not have the personnel to adequately support its existing users, let alone the customer base for Bio-Rad, which is much larger.
17. The choices available in confocal microscopy will be severely limited.
18. The merger will not serve the scientific community, and it will see the end of a development technology company that has, over the years, provided a great deal of innovation and creativity, and at more competitive prices than those offered by Zeiss.

19. There is a concern that Zeiss will less actively support the Bio-Rad equipment in the field, and that in developing new products Zeiss will bundle together its microscopes with the Bio-Rad line of microscope related products, for example, the MP2100, which can be used with many other types of microscopes. This could lead to much higher prices for these key scientific instruments.
20. Bio-Rad was the first company to offer a practical and usable confocal microscope and, as such, has built up a huge installed base. These customers will be severely disadvantaged if they are unable to maintain their instruments.
21. The merger may have serious implications regarding the ability to purchase the most appropriate instrument and be assured of long-term service. The concern is that the acquisition will result in diminished access to the best attributes of the instrumentation from Bio-Rad. An additional concern is whether Zeiss will continue to support the existing population of Bio-Rad instruments and in accordance with Bio-Rad's current standards.