



Business Council of Australia

Submission to

Senate Select Committee on the National Broadband Network

Table of Contents

| Introduction | 1 |
|--|----|
| Economic benefits from high speed broadband | 1 |
| BCA's policy agenda provides the context for our submission | 2 |
| Further analysis of the NBN is warranted | 2 |
| Policy should support the development of broadband but avoid unintend consequences | |
| Policy goals on competition and investment need to be clearly articulated | 4 |
| Concluding remarks and contact details | 5 |
| Attachment 1: Submission by the Business Council of Australia to the Nation Broadband Network: Regulatory Reform for 21st-Century Broadband Reviews 2000 | ew |
| June 2009 | ხ |

INTRODUCTION

The Business Council of Australia's (BCA) vision is for Australia to be the best place in the world to live, work, learn and do business. We have set an aspiration for Australia to be in the top 5 countries in the OECD by 2012, measured by GDP per capita. Australia's economic infrastructure will make a key contribution to realising that goal. Investment that raises the speed, quality and coverage of high-speed broadband provision in Australia has the potential to contribute to innovation, productivity and economic growth in the coming decades.

ECONOMIC BENEFITS FROM HIGH SPEED BROADBAND

It is widely accepted that information and communication technology (ICT) products used in the production process of firms can increase labour productivity. The rate and effectiveness at which firms and consumers take up new ICT products is critical to reaping the rewards from technological improvement. There are also benefits beyond the firm. Investment and use of ICT can create spill-over benefits through the development of networks and by reducing the costs of matching customers with suppliers. Many other benefits that improve our lives through better quality service provision or time saving may not show up in official statistics but are no less important.

The productivity benefits of high speed fixed network broadband provision are, however, difficult to pinpoint. Most of the analysis to date has considered the productivity benefits from the use of ICT inputs rather than high speed broadband per se. The Productivity Commission concluded on the basis of available studies that approximately one to two tenths of a per cent of Australia's multifactor productivity growth in the 1990s was due to the use of ICT. In a recent report Access Economics highlighted the paucity of research data on the productivity benefits from high speed broadband but assumed for the purposes of its analysis that productivity would be around 0.1 per cent a year higher over

¹ Productivity Commission, ICT Use and Productivity, 2004, pp. 50–51

ten years. The benefits would derive from internet functions not available at lower speeds such as videoconferencing, VoIP phone services and services such as e-learning. ²

As a general observation, further detailed analysis of the productivity benefits from high speed broadband would be useful in guiding public policy in this sector. The BCA would welcome the government commissioning further work on this topic.

BCA'S POLICY AGENDA PROVIDES THE CONTEXT FOR OUR SUBMISSION

Our consideration of the National Broadband Network (NBN) proposal and of future telecommunications market policy settings draws upon the BCA's core policy principles, in particular principles that we have promoted under our infrastructure and better regulation policy agendas.

Those principles support market-led investment where price signals match the interests of producers and consumers in contestable market segments.

The policy framework should encourage competition and efficient investment to meet the long-term needs of consumers as technology and market conditions evolve in the years ahead. Pro-competition policies, such as the imposition of equivalence measures in wholesale provision, will support competition in the retail sector. Equally important is the encouragement of efficient investment, for without adequate investment the underlying infrastructure does not develop and consumers are ultimately worse off.

The market for high speed broadband, and ICT products more generally, is characterised by a fast developing technology base. A dynamic and evolving Australian telecommunications sector will bring those new technologies to market so that Australians can access the best and latest products both as inputs to production and as final goods for consumption.

FURTHER ANALYSIS OF THE NBN IS WARRANTED

The NBN proposal provides a roadmap for the telecommunications sector in the coming years. The government's decision to form a public company to oversee an estimated

² Access Economics, *Impacts of a national high-speed broadband network*, 2009, p. 20

\$43 billion in investment in Australia's high-speed broadband network is however a significant departure from past policy approaches in the ICT sector and the market-led approach to broadband investment favoured by the OECD. The proposal is therefore not without some risk and, while the objective to increase broadband provision is laudable, the BCA contends that further analysis of the proposal is warranted.

In recent advice to governments the OECD has stated that policymakers must evaluate the costs and benefits of any government investment in communication infrastructure.³ Consistent with this advice and with international best practice, the government should provide publicly and in full a cost-benefit analysis that also sets out the investment case for the planned rollout, including the broader consumer, productivity and economic benefits identified from the investment. The analysis should include an appraisal of the current level of broadband service provision, the levels of unmet demand now and which might be expected into the future and the benefits to the economy from the incremental increase in high speed broadband provision that the NBN will deliver.

Rigorous cost-benefit analysis needs to be an in-built part of all spending decisions to ensure we are directing available resources to their most productive uses. The government needs to remain committed to having Infrastructure Australia audit the likely benefits of major infrastructure projects and ensuring the transparency of policy advice.

The government can build business and community confidence in this major public investment by demonstrating that the NBN proposal offers the best way forward. It can do this by comparing the NBN proposal with alternative policy settings such as those that apply in other countries in terms of the outcomes achieved, and the cost and the timeliness of implementation. International experience would appear to demonstrate that a regulatory environment can be structured to encourage large-scale private investment in next generation broadband. This approach is preferred by the OECD and recommended by major studies undertaken by Franceso Caio for the UK Government and MICUS Management Consulting GmbH for the European Commission.⁴

Business Council of Australia

_

³ OECD, The Role of Communication Infrastructure Investment in Economic Recovery, 2009, p16

⁴ OECD, Shaping Policies for the Future of the Internet Economy, 2008, p. 6; OECD 2008, Broadband Growth and Policies in OECD Countries, 2008, p. 12, OECD, The Role of Communication Infrastructure Investment in Economic Recovery, 2009, p. 31, Caio, F, The next

POLICY SHOULD SUPPORT THE DEVELOPMENT OF BROADBAND BUT AVOID UNINTENDED CONSEQUENCES

Prompt completion of the implementation study is paramount. The future state of the high-speed broadband market will depend largely on the outcome of the NBN implementation study and the response by key market participants. Broadband take-up in Australia has increased markedly in recent years, but much potential current and future investment could be held back until the government's intentions are fully known.

The impact of the NBN and the telecommunications regulatory regime on investment incentives and competitive outcomes in all segments of the telecommunications sector will need to be carefully assessed. Policies that have the effect of deterring private investment or which lead to other unintended consequences that impede the development of the market should be avoided. The analysis should include any impact that the rollout of the NBN might have on investment in wireless networks. The productivity benefits from ICT use are increasingly being driven by changes in firm practices made possible by greater mobility and portability from the growth of wireless networks. In the current economic climate we cannot afford for investment in the telecommunications sector to be held up due to ill-considered intervention or bureaucratic delay.

POLICY GOALS ON COMPETITION AND INVESTMENT NEED TO BE CLEARLY ARTICULATED

Given the significant change to policy, the government should clearly articulate its policy goals on wholesale market competition and private investment in the telecommunications sector. It is not clear, for example, whether the government intends for the NBN to be the dominant telecommunications network or part of a competitive wholesale market.

There are a number of benefits of network competition that should be carefully weighed up in considering those policy goals. Network competition will make available a range of cost and quality options for customers with different preferences for broadband services.

phase of broadband UK: Action now for long term competitiveness, report to the UK government, September 2008, p9-10 and MICUS Management Consulting GmbH, *The Impact of Broadband on Growth and Productivity*, study on behalf of the European Commission, 2008, p. 112.

It will allow fixed line technologies which are not integrated into the NBN architecture to find an alternative route to market. And it will ensure that a viable, competitive wholesale market is in place when the government sells down its interest in the NBN company five years after the network is built, including maintaining the presence and strength of prospective purchasers of the NBN.

CONCLUDING REMARKS AND CONTACT DETAILS

Australia's broadband market has developed significantly in recent years with over 50 per cent of households and over 95 per cent of SMEs now having access to broadband. Policy settings in the telecommunications sector should be aimed at supporting the further development of this market and maximising the potential innovation and productivity gains from the use of information and communications technology by businesses and household.

A copy of the BCA's submission to the government's *National Broadband Network:* Regulatory Reform for 21st-Century Broadband review, which addresses some of these issues in more detail, is provided as an attachment.

For any queries in relation to this submission, please contact Maria Tarrant, Director Policy, Business Council of Australia at: maria.tarrant@bca.com.au or on (03) 8664 2664.

ATTACHMENT 1: SUBMISSION BY THE BUSINESS COUNCIL OF AUSTRALIA TO THE NATIONAL BROADBAND NETWORK: REGULATORY REFORM FOR 21ST-CENTURY BROADBAND REVIEW – JUNE 2009





Business Council of Australia

Submission to the

Department of Broadband, Communications and the Digital Economy

on

Regulatory Reform for 21st-Century Broadband

June 2009

Table of Contents

| Key points | 3 |
|---|----|
| High-speed broadband can contribute to productivity and economic growth | 4 |
| Policy settings must promote efficient investment and competition | 5 |
| Greater clarity will underpin confidence in the NBN | 7 |
| Uncertainty makes it difficult to assess regulatory proposals | 9 |
| International experience is useful where the contextual comparison is valid | 11 |
| Finalisation of the implementation study is now paramount | 12 |
| Recommendations | 12 |

KEY POINTS

The Business Council of Australia represents the CEOs of 100 of the top businesses in Australia. The BCA's vision is for Australia to be the best place in which to live, work, learn and do business.

The government's policy settings in the telecommunications sector, including both competition policy and those dealing with the governance and operation of the proposed National Broadband Network (NBN), should be aimed at supporting innovation and productivity gains from the use of information and communications technology and economic growth.

A dynamic and evolving Australian telecommunications sector will be important for achieving the potential gains to productivity and economic growth from high-speed broadband in the future.

It is therefore important to carefully consider the investment incentives and competitive outcomes in all segments of the telecommunications sector when undertaking changes to the regulatory regime and to avoid deterring private investment or other unintended consequences.

Fundamentally, the options raised by the government for the future regulatory framework for telecommunications should be tied to an assessment of the future state of competition in the market. Such an assessment critically depends on the NBN implementation study and, importantly, the nature of the response by key players in the market. There is therefore an urgent need to:

- Complete the NBN implementation study to provide clarity to the market
- Release a cost-benefit analysis of the NBN to underpin confidence in the proposal.

The government should also provide more clarity on its policy goals for the telecommunications market, specifically in relation to wholesale market competition and ongoing private investment in fixed and wireless broadband during the transition to the NBN and beyond.

The federal government has placed itself squarely in the centre of this important market over the coming decades. It is imperative that the future development of the market is not impeded by ill-considered intervention or bureaucratic delay.

The BCA makes the following high-level recommendations:

- The government should clarify its policy goals regarding wholesale market competition and future private investment in the telecommunications sector during the transition to the NBN and beyond.
- A thorough cost-benefit analysis of the NBN proposal should be made publicly available, to ensure that the approach that has been proposed has a net benefit for the Australian economy and to underpin confidence in the investment. Consistent with good policymaking more generally, alternatives should be considered and the approach chosen should be proportionate and costed.
- The government should make the completion of the NBN implementation study a high priority and avoid upholding potential investment, both within and outside the NBN, due to bureaucratic delay or regulatory uncertainty.
- The government should avoid significant regulatory reform without first having reviewed and publicly identified the outlook for competition in the telecommunications sector, taking into account the implementation of the NBN and market responses to the implementation of the NBN.
- While certainty is a key requirement for any regulatory settings, the government should make flexibility a key priority for any regulatory arrangements during the transition phase, such that those arrangements can be altered to take into account changes in market structure in the future.

HIGH-SPEED BROADBAND CAN CONTRIBUTE TO PRODUCTIVITY AND ECONOMIC GROWTH

Technological development is a key driver of long-term economic growth. High-speed telecommunication services can be used to increase labour productivity in firms, drive innovation and to improve the lives of Australians through better quality service provision or time saving.

Investment that raises the speed, quality and coverage of high-speed broadband provision in Australia therefore has the potential to contribute to innovation, productivity

and economic growth in the coming decades. The rate and effectiveness at which firms and consumers take up new technologies is critical to reaping the rewards from technological improvement.

It is notable that the growing investment and use of wireless broadband technologies has shifted the emphasis in developed economies towards achieving productivity benefits from portability and high speed wireless networks. The OECD says that 'increased ICT penetration is no longer a major source of productivity growth in developed countries, but new features (such as portability and wireless connectivity) can boost productivity in activities requiring information and communication.'

On the whole, government policy settings that support a dynamic and evolving market for high-speed broadband are important to ensure that Australians have access to the best and latest products, both as inputs to production and as final goods for consumption.

POLICY SETTINGS MUST PROMOTE EFFICIENT INVESTMENT AND COMPETITION

The government's policy settings in the telecommunications sector, including both competition policy and those dealing with the governance and operation of the proposed National Broadband Network, should be aimed at supporting productivity gains from the use of information and communications technology and economic growth.

The regulatory framework must encourage efficient investment and competition and meet the long-term needs of consumers as technology and market conditions evolve in the years ahead. Getting the balance right is critical.

Our consideration of future telecommunications regulatory settings draws upon our core policy principles, in particular principles that we have promoted under our infrastructure and better regulation policy agendas.

Those principles support market-led investment where market-based price signals match the interests of producers and consumers at all points in the value chain. Pro-competition policies, such as the imposition of equivalence measures on incumbent wholesale providers in critical infrastructure sectors, are important for ensuring consumers benefit from retail competition. Equally important is the encouragement of investment, for without adequate investment the underlying infrastructure does not develop and consumers are ultimately worse off.

BCA Foundation Policy Principles for Infrastructure

In a submission to Infrastructure Australia the BCA outlined its foundation strategies for infrastructure policy in Australia (including telecommunications infrastructure). They are:

- 1. Effective national (not state-based) infrastructure markets, including national or uniform regulation.
- 2. Market-based prices that send the appropriate signals to consumers and suppliers (cover long-run marginal costs, reflect time of use).
- Public investment processes that are integrated across governments, forward looking, based on consideration of all options and favour projects with the highest (and published) benefit cost ratios.
- 4. Effective competition in all contestable market segments.
- 5. Private ownership as the preferred model in all contestable market segments.
- 6. Regulation of infrastructure that does not discourage investment seeking to meet expected demand.

The telecommunications sector has a constantly evolving technological base and a 'dynamic' market structure. A competitive market characterised by turnover in products, technologies and even at times market participants is an important driver of evolution in this sector and is something from which we all ultimately benefit. By the same token, such an environment creates risks for investors who legitimately seek to earn appropriate returns in an uncertain and volatile market. Investment is critical for ensuring the telecommunications sector operates at the technology frontier – a positive environment for investment should be a cornerstone of policy in this sector.

Policy goals and settings should continue to support competition at all stages in the market as well as providing appropriate incentives for private investment in fixed and wireless broadband infrastructure and downstream service provision.

The report of the OECD Ministerial Meeting on the Future of the Internet Economy in Seoul set out a number of policy principles including that 'the private sector should take

the lead in developing well-functioning broadband markets' and that 'governments need to actively look for ways to encourage investment in infrastructure'.⁵

These principles support a market-led approach to the development of Australia's highspeed broadband infrastructure but also allow for an appropriate government intervention where there is a clearly demonstrated failure of the market to achieve an optimal outcome.

The government's policy goals, outlined early in the consultation paper, do not include a clear statement on future competition in the wholesale market.⁶ Rather, the consultation paper raises questions about future policy settings that should be in place 'during the transition to the NBN'. It is not clear whether 'transition to the NBN' suggests a competitive wholesale market for fixed broadband in the future or a market dominated by the NBN.

This is a key point as the degree of competition in the wholesale market in the future is directly relevant to the consideration of the appropriate regulatory structure.

There is therefore a need for an explicit objective that clearly communicates to all stakeholders the government's views on competing broadband investment during the transition to the NBN and beyond.

GREATER CLARITY WILL UNDERPIN CONFIDENCE IN THE NBN

The government's decision to form a public-private company to oversee an estimated \$43 billion in investment in Australia's high-speed broadband network is a significant

Business Council of Australia

_

⁵ OECD, *Shaping Policies for the Future of the Internet Economy*, 2008. In addition, a recent report to the EU Commission which identified substantial economic benefits from broadband advised that 'whenever possible, demand-driven levers should be used to encourage private parties to invest in the development of the infrastructure. This infrastructure development can be achieved through an efficient private market, without the need for public financing. Policies, though, should guarantee that the market-monitoring agencies have enough power to fulfil their mission.' See the MICUS Management Consulting GmbH study on behalf of the European Commission, *The Impact of Broadband on Growth and Productivity*, 2008, p.112.

⁶ See pages 3–5 of the discussion paper. The government recognises the need to provide regulatory certainty to encourage private sector investment in the NBN company (p. 8).

departure from past policy approaches in the ICT sector and the market-led approach to broadband investment favoured by the OECD.⁷

Exhibit 1: OECD advice for developing high-speed broadband

The report of the OECD Ministerial Meeting on the Future of the Internet Economy in Seoul in 2008 set out a number of policy principles for developing broadband including principally:

 Ensuring that market structures allow for developing broadband infrastructures that deliver high-quality services at competitive prices with a broad range of user choice.

An OECD background paper drafted for the Seoul conference recommended that:

- The private sector should take the lead in developing well-functioning broadband markets.
- Governments need to actively look for ways to encourage investment in infrastructure.

The 'Seoul Declaration', which followed the conference and was endorsed by the OECD members, set out a roadmap for developing the digital economy incorporating these principles. Signatory nations declared that they will:

- Establish a regulatory environment that assures a level playing field for competition.
- Stimulate investment and competition in the development of high capacity and communication infrastructures.

In its most recent advice the OECD has said that:

Policymakers must take great care to design public investments in a way that they
promote competition without disrupting private investment.

Source: OECD, Shaping Policies for the Future of the Internet Economy, 2008, p. 6; OECD 2008, Broadband Growth and Policies in OECD Countries, 2008, p. 12 and OECD, The Role of Communication Infrastructure Investment in Economic Recovery,

Business Council of Australia

_

⁷ OECD, Shaping Policies for the Future of the Internet Economy, 2008.

2009, p. 31.

By creating a new, dominant provider of telecommunications services, the introduction of the NBN will significantly alter the market. It will be important to avoid any unintended consequences such as any unnecessary crowding out of planned private investment in fixed and wireless broadband services. It will also be important to provide confidence in the proposal for any private companies seeking to invest or collaborate in the operation of the NBN.

The government can build business and community confidence in this major public investment by articulating the rationale for the policy approach taken and demonstrating that the NBN proposal offers the best way forward.

In recent advice to governments the OECD has stated that policymakers must evaluate the costs and benefits of any government investment in communication infrastructure. Consistent with this advice and with international best practice, the government should provide publicly and in full a cost-benefit analysis that also sets out the investment case for the planned rollout, including the broader consumer, productivity and economic benefits identified from this government investment.

The BCA considers that in order to promote an understanding of the government's reasoning in relation to such large public infrastructure projects, it is important for the government and business to work together constructively to best position Australia's future, particularly in the current challenging economic environment. The BCA would welcome the opportunity to work further with the government in this regard.

UNCERTAINTY MAKES IT DIFFICULT TO ASSESS REGULATORY PROPOSALS

The government has identified the announcement of the NBN as an appropriate time to update telecommunications policy settings within this new policy paradigm. It has invited comment on issues regarding the transition period to the rollout of the NBN, including on

⁸ OECD, *The Role of Communication Infrastructure Investment in Economic Recovery*, 2009, p. 16.

the telecommunications competition framework and consumer safeguards. In particular it identifies possible changes to Part XIC access arrangements, anti-competitive conduct provisions and separation arrangements for Telstra.

The review anticipates a competitive environment which as yet is uncertain. The NBN introduces a major new provider to the wholesale telecommunications market and we are yet to know how existing wholesale providers will respond. Accordingly, developing any regulatory responses now may be difficult and have unintended consequences, given the uncertainty surrounding what the long-term environment might look like.

Regulatory settings determined now would be largely based on historic information about the state of the telecommunications market which will in all likelihood be very different to the market over the transition period. The government should avoid regulatory responses to the current market environment, without first having reviewed and publicly identified the policy goals and outlook for competition in the sector in the future.

Clearly a significant amount of future investment will be undertaken by the government's NBN corporation, some of which is likely to be in collaboration with the private sector.

But it cannot be assumed at this point in time that the rollout of the NBN will preclude competition from competing networks during the transition to full rollout and beyond. The experience from around the world is that alternative networks (e.g. copper using DSL technologies and HFC cable) continue to compete with FTTN/FTTP networks where they are being introduced. ⁹

There are a number of benefits of network competition that should be carefully weighed up. Network competition would make available a range of cost and quality options for customers with different preferences for broadband services. It would allow wireline technologies which are not integrated into the NBN architecture to find an alternative route to market. And it would ensure that a viable, competitive wholesale market is in place when the government sells down its interest in the NBN company five years after the network is built, including maintaining the presence and strength of prospective purchasers of the NBN.

Business Council of Australia 10

_

⁹ In the UK, Virgin Media plans to extend the reach of its cable network to an additional half million homes in competition to BT's 21st century network (21CN). In the United States, Verizon is retaining its copper network as it rolls out FTTP. (Source: Virgin Media and Verizon websites.)

INTERNATIONAL EXPERIENCE IS USEFUL WHERE THE CONTEXTUAL COMPARISON IS VALID

International experience would appear to demonstrate that a regulatory environment can be structured to encourage large-scale private investment in next generation broadband. Under such an approach, appropriate separation arrangements coupled with requirements for the equivalence of price and service in the provision of network products to downstream customers can lead to positive market outcomes. ¹⁰

In the UK, where this approach has been adopted, BT has announced a £1.5 billion rollout of FTTN/FTTC to 40 per cent of the population following a negotiated settlement with the regulator Ofcom. Telecom New Zealand underwent operational separation in 2008 and is presently rolling out a FTTN network. The Netherlands and Japan, two countries that compare well on international broadband comparisons, promote private sector driven broadband investment. Clearly the international experience has a number of lessons we can draw upon as is acknowledged in the consultation paper.

The consultation paper specifically refers to the separation arrangements in the UK and New Zealand and the intentions of the European Commission to also follow this path. The UK, EC and NZ references might ordinarily be instructive international experiences for Australia.

The establishment of the NBN corporation will however create a rather different scenario in Australia where market power will cede to a powerful new entrant owned and operated by the government. The response of other key market players is as yet unknown and will define the extent of competition in the wholesale market. The Australian wholesale market for broadband services could therefore have some significant differences to overseas experience. The government's proposal also provides a significant public subsidy and is very much a supply-oriented approach, two other key differences with overseas experience.

¹⁰ The OECD had concluded in 2003 that the costs of structural separation of a PSTN network operator would more than likely outweigh any benefits, however it now questions whether that finding would still hold for a fibre network (due to the high fixed costs of entry). OECD, 2008, p. 54.

¹¹ OECD, 2008, p. 58.

These factors should cause some reflection on whether the UK, EC and NZ approaches offer appropriate guidance for the future Australian situation.

Fundamentally, regulation in the telecommunications sector such as the options discussed in the consultation paper should be determined by an assessment of the state of the market now and in the future with a strong justification provided that regulatory reform is necessary to achieve the government's objectives. Should it then be decided to put in place more stringent regulations now, there would also be a need to continually assess those regulations to take into account changes in the market during the rollout of the NBN and beyond.

FINALISATION OF THE IMPLEMENTATION STUDY IS NOW PARAMOUNT

Prompt completion of the implementation study is paramount. The future state of the high-speed broadband market will depend largely on the outcome of the NBN implementation study and the response by key market participants.

Broadband take-up in Australia has increased markedly in recent years. But much potential current and future investment will only proceed once the government's intentions are fully known. The federal government has placed itself squarely in the centre of this important market over the coming decades. It is therefore imperative that the government finalises the implementation study as soon as possible. In the current economic climate we cannot afford for investment in this sector to be held up due to ill-considered intervention or bureaucratic delay.

RECOMMENDATIONS

The BCA makes the following high-level recommendations:

- The government should clarify its policy goals regarding wholesale market competition and future private investment in the telecommunications sector during the transition to the NBN and beyond.
- A thorough cost-benefit analysis of the NBN proposal should be made publicly available, to ensure that the approach that has been proposed has a net benefit for the Australian economy and to underpin confidence in the investment. Consistent with good policymaking more generally, alternatives should be considered and the approach chosen should be proportionate and costed.

- The government should make the completion of the NBN implementation study a high priority and avoid upholding potential investment, both within and outside the NBN, due to bureaucratic delay or regulatory uncertainty.
- The government should avoid significant regulatory reform without first having reviewed and publicly identified the outlook for competition in the telecommunications sector, taking into account the implementation of the NBN and market responses to the implementation of the NBN.
- While certainty is a key requirement for any regulatory settings, the government should make flexibility a key priority for any regulatory arrangements during the transition phase, such that those arrangements can be altered to take into account changes in market structure in the future.