



HUTCHISON TELEPHONE COMPANY LIMITED

HUTCHISON 3G HK LIMITED

**SUBMISSION TO
LEGISLATIVE COUNCIL
BILLS COMMITTEE**

ON

**PROPOSED REGULATION OF
MERGERS AND ACQUISITIONS IN
THE TELECOMMUNICATIONS MARKET**

UNDER

TELECOMMUNICATIONS (AMENDMENT) BILL 2002

16 SEPTEMBER 2002

EXECUTIVE SUMMARY

- ◆ Hutchison supports the Government's policy to promote fair, healthy and effective competition.
- ◆ However, for the reasons deliberated in this submission, Hutchison is of the view that the application of mergers and acquisitions regulations to the telecommunications industry is inappropriate.
- ◆ The Government has argued in the Legislative Council Brief (paragraph 11) that a sector specific merger and acquisition regulatory regime is necessary because of the structural features of the telecommunications industry. Hutchison questions these assumptions and findings on which the proposal is based. With a population of only 7 million people, there are 6 mobile network operators, 6 mobile virtual network operators and a large number of resellers and value added service providers. The Hong Kong mobile sector is relatively small and highly competitive. It is also known to be a sector with one of the highest penetration rates in the world (currently over 80%).
- ◆ The Government's conclusion that there is a need for additional regulation is not supported by the facts. The telecommunications industry is already subject to comprehensive prohibitions against anti-competitive conduct, and the concerns which the Government perceives and raises about the industry are fully addressed by the existing regulatory regime particularly the wide powers the TA has to regulate conduct.
- ◆ In fact there have been a number of mergers and acquisitions over the last few years which demonstrate that competition has worked effectively under the existing regulatory regime.
- ◆ With the introduction of the proposed regime, Hong Kong SAR would become the only jurisdiction in which competition laws and the review of mergers and acquisitions would apply only to one sector of the economy, the telecommunications sector.

Telecommunications should be on a level playing field with other sectors of the Hong Kong economy in relation to the regulation of mergers and acquisitions.

- ◆ In other countries, the difficult condition of the telecommunications industry has precipitated a rethink of the extent and operation of regulation, including the strictness of controls on mergers. So, at the same time that other countries are considering relaxing regulatory controls to assist their telecommunications industries, Hong Kong continues to add to the regulatory burden.
- ◆ The vague language of the proposed Bill and the broad discretions which will be vested in the TA are inappropriate and accentuate the problems with sector specific application of the regulations.
- ◆ Hutchison is concerned that under the proposed Bill the powers which should be exercised by the Legislative Council will be transferred to the TA, an administrative authority. The guidelines, which aim to set out the criteria the TA will consider in determining whether a change or proposed change has, or is likely to have, an anti-competitive effect, and which therefore represent the crux of the regulations, are yet to be drafted, consulted upon or issued by the TA.
- ◆ With the technical deficiencies and uncertainties of, and the overwhelming power reserved to the TA under, the proposed regulatory framework, although branded by ITBB as an *ex post* regime, the proposed regulation effectively remains an *ex ante* one.
- ◆ ITBB and the TA say that the Bill has been modelled on similar merger laws in other countries, but those laws are administered by a general competition authority and not by an industry specific regulator who lacks the necessary skills, experience and perspective required for competition matters. Furthermore, the Australian merger law is currently being examined by a Government inquiry following criticism that the law lacks clear standards, is administered in an uncertain and unpredictable manner, and operates in practice as an *ex*

ante and not *ex post* regime. ITBB and the TA do not seem to have taken account of these criticisms.

- ◆ If the guidelines, howsoever drafted and developed, are unclear, vague or incomplete, the interpretation and construction would in effect largely be left to the discretion of the TA. This will intensify regulatory intervention, and increase rather than decrease regulatory uncertainties and disincentives to investment.

- ◆ Hutchison is concerned that the Bill represents a direct contradiction to the policy of light regulation pronounced by the TA and requests the Legislative Council, in the interest of healthy development of the telecommunications industry in Hong Kong, to consider rejecting the sector specific application of regulation of mergers and acquisitions to the telecommunications industry.

INTRODUCTION

1. Hutchison Telephone Company Limited (“**HTCL**”) and Hutchison 3G HK Limited (collectively hereinafter referred to as “**Hutchison**”) refer to the regulation of mergers and acquisitions in the telecommunications market proposed under the Telecommunications (Amendment) Bill 2002 (the “**Bill**”) which was introduced to the Legislative Council for First Reading and Second Reading on 15 May 2002.
2. The Administration’s original proposal on the regulation of mergers and acquisitions in the telecommunications market, as set out in the consultation paper issued by the Office of the Telecommunications Authority (“**OFTA**”) of 17 April 2001 (the “**Consultation Paper**”), was to establish a rigorous *ex ante* or pre-notification and approval regulatory regime. A total of 17 submissions were made in response to the Consultation Paper. Contrary to the statement in the Legislative Council Brief dated 3 May 2002 issued by the Information Technology and Broadcasting Bureau (“**ITBB**”) on the Bill (the “**Brief**”), a majority of the submissions voiced strong opposition to the mergers and acquisitions regulation proposed in the Consultation Paper on different grounds including the *ex ante* approach and the sector specific application of merger controls.
3. Hutchison understands that the debate on the Second Reading of the Bill has resumed and would like in this submission to present our views and comments on the subject of sector specific regulation of mergers and acquisitions in the telecommunications market, and on the Bill for consideration by the Legislative Council Bills Committee.
4. Hutchison supports the Government’s policy to promote fair, healthy and effective competition in the telecommunications market. However, for the reasons deliberated below, Hutchison is of the view that sector specific application of mergers and acquisitions regulations to the telecommunications industry is inappropriate.

5. Hutchison would like to thank the Legislative Council Bills Committee for the invitation to attend the meeting scheduled to be held on 7 October 2002 to make representations on the subject, and is pleased to confirm that it will be attending. In the meantime, should the honorary legislative councillors desire, Hutchison is happy to further elaborate, and answer queries, on any of our views and comments set out in this submission.
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SECTOR SPECIFIC APPLICATION

6. The Government has argued in the Brief (paragraph 11) that a sector specific mergers and acquisitions regulatory regime is necessary because of the structural features of the telecommunications industry, including high concentration levels, high barriers to entry through high sunk costs, scarcity of radio spectrum and high levels of vertical integration. Hutchison questions these assumptions and findings on which the proposal is based.
7. With a population of only 7 million people, there are 6 mobile network operators, 6 mobile virtual network operators (“MVNOs”) and a large number of resellers and value added service providers. The Hong Kong mobile sector is relatively small and highly competitive. It is also known to be a sector with one of the highest penetration rates in the world (currently over 80%).
8. Quite contrary to the description of the Hong Kong telecommunications industry by ITBB as one with high barrier to entry due to high sunk costs, Hong Kong has established access regimes including the requirement of the 3G licences to open up 30% network capacity to MVNOs. This together with the fact that there is a growing number of MVNOs, resellers and value added service providers renders the argument of high barrier to entry an academic one detached from reality in the telecommunications market in Hong Kong.
9. In Hutchison’s view, scarcity of spectrum does not validly substantiate and support the sector specific regulation of mergers and acquisitions in the telecommunications industry.

The telecommunications industry is not the only industry in Hong Kong faced with scarcity of resources on which the business is operated. The Government has failed to explain why the telecommunications industry is singled out on such basis.

10. The Government has also argued that high levels of vertical integration warrants special treatment of the telecommunications industry. However, Hutchison questions such argument. The established access regimes allow MVNOs, resellers and value added service providers to provide services at different points of supply chain in competition with services provided by the operators. Distribution channels are usually wide in the case of mobile network operators to also include, in addition to retail shops, third party dealers. Hutchison contends that vertical integration does not necessarily give rise to competitive concerns which are adequately addressed by the wide powers the Telecommunications Authority (the “TA”) has to regulate conduct on an ongoing basis.
11. The telecommunications industry is already subject to comprehensive prohibitions against anti-competitive conduct contained in their licences and the Telecommunications Ordinance, and the concerns which the Government perceives and raises about the industry are fully addressed by the existing regulatory regime particularly the wide powers the TA has to regulate conduct. The Government’s conclusion that there is a need for additional regulation is therefore not supported.
12. There seems to be an underlying assumption that mergers and acquisitions necessarily or usually raise competitive concerns and therefore need to be subjected to a regime of close scrutiny. Mergers and acquisitions are a normal and healthy part of the functioning of a market, and occur on an unregulated basis in the rest of the economy. The view that telecommunications mergers and acquisitions raise special concerns also assumes that the current state of the market represents a competitive equilibrium, that is that the current number of competitors is sustainable and that individual operators are commercially viable. However, it is well known that some mobile network operators in Hong Kong are not profitable and that Hong Kong, for the size of its market, has more operators than any other

market in the world. Hutchison is concerned that the proposed merger regulation will be a hurdle to the rationalization which should occur in the mobile industry.

13. In fact the Hong Kong mobile sector has in recent years experienced a string of mergers and acquisitions, including CSL's acquisition of PacLink, SmarTone's acquisition of P Plus, British Telecom's acquisition of an interest in SmarTone, DoCoMo's acquisition of an interest in HTCL and Telstra's acquisition of a further interest in CSL, which demonstrate that competition has worked effectively under the existing regulatory regime.
14. With the introduction of the proposed regime, Hong Kong would become the only jurisdiction in which competition laws and the review of mergers and acquisitions would apply only to one sector of the economy, the telecommunications sector. Hutchison fails to see the justification for singling out the telecommunications industry and contends that the telecommunications should be on a level playing field with other sectors of the Hong Kong economy in relation to the regulation of mergers and acquisitions.
15. Overseas, there also has been debate about whether merger regulation should be relaxed given the difficult state of the telecommunications industry. Michael Powell, Chairman of the Federal Communications Commission, has stated that the industry problems are:
 - High level of debt ;
 - Lack of investor confidence;
 - Capital markets closing to new investment; and
 - Companies that have pulled back from spending in this capital intensive industry.”¹

16. Chairman Powell commented that “pressure will continue to mount for companies to restructure or exit the market”. He called for “prudent restructuring”, noting that “depending on the facts of any given transaction, such restructuring is not necessarily adverse to consumer interests”.
17. Industry specific application of mergers and acquisitions regulations to the telecommunications industry might stifle the interest of international and local investors in participating in such an industry, and particularly when joint ventures and partnerships are becoming more and more common forms of investment. In a free capital market like Hong Kong's, different sectors of the economy compete against each other for the available capital. Further, as Hong Kong has an open economy, operators compete for capital in the global market against other economies. Regulatory risk is a major consideration for investors, especially in capital intensive industries like telecommunications. Faced with the prospect of a very uncertain and unpredictable process for merger approval in telecommunications (whether ex ante or ex post), compared to no requirement for merger approvals in any other sector, risk adverse investors, who are already uncertain about the prospects of the telecommunications industry, will look elsewhere. The disincentives to investment brought about by the proposed telecommunications specific merger rules also run the danger of inhibiting Hong Kong’s development as an international telecommunications hub. .
18. So, at the same time that other countries are considering relaxing regulatory controls to assist their telecommunications industries, Hong Kong continues to add to the regulatory burden. There is no compelling justification for an industry specific application of the mergers and acquisitions regulations to the telecommunications industry, and Hutchison requests that the Legislative Council consider rejecting sector specific mergers and acquisitions regulations in the telecommunications industry.

¹ Statement of Michael K Powell, Chairman, Federal Communications Commission, on “Financial Turmoil in the Telecommunications Marketplace: Maintaining the Operations of Essential Communication” Before the Committee on

INDEPENDENT COMPETITION AUTHORITY

19. As seen from the experience of many other overseas jurisdictions, anti-trust law is a highly complex area of law for which extensive knowledge of legal and economic principles is necessary. The analysis and determination of competition issues therefore requires skills and expertise distinct from those of a telecom regulator.
20. Hong Kong would be the only jurisdiction in which competition laws and review of mergers and acquisitions apply only to the telecommunications sector. There is only one other significant telecommunications specific regulator which has merger control powers: the FCC in the United States. Many influential members of the Congress in the United States have called for an end to FCC's review of mergers, including Congressman Tauzin, who is head of the Congressional committee that oversees the FCC, and Senators Hatch and McCain.² The Chairman of the FCC, Michael Powell, has stated: "We should constantly ask ourselves whether some other agency has roughly equivalent or even superior expertise and authority to address any given factor, either in reviewing the merger at issue or in some other context....Simply put, we cannot command respect as an "expert agency" if our pronouncements turn on subjects in which we are not expert or which do not rely on our unique capabilities."³
21. The OECD has stated that:

"Compared with sector specific regulators, competition agencies seem better suited by their accumulated expertise, experience and basic institutional characteristics ("institutional culture") to protect competition from anti-competitive behavior and mergers. For the same reasons, it seems generally true that compared with

Commerce, Science and Transportation, United States Senate 30 July 2002

² See e.g. "FCC Reform Likely in New Congress", <http://news.cnet.com/news/0-1004-200-4360821.html>; "Senators Approve Bill Limiting FCC Merger Reviews", <http://news.cnet.com/news/0-1004-200-344373.html?tag=rtdnws>; "FCC Chairman Powell Seeks to Overhaul Agency", <http://www.nwfusion.com/news/2001/0329fccpow.html>

competition agencies, sector-specific regulators are better suited to undertaking economic regulation [e.g. interconnection].”⁴

Independence of any competition authority is important to ensure fairness to the firms regulated and the advancement of public interest. It is generally believed that a sector specific regulator is more prone to “regulatory capture” given the in-depth industry specific knowledge, contacts and outlook of the regulator and the higher degree of ongoing interdependence between regulators and regulated firms.

22. In a market which is sufficiently competitive, thought should be given to regulatory forbearance and an independent competition agency should have less self interest in unnecessarily continuing regulation and should be better placed than a sector specific regulator to decide this question.
23. Hutchison therefore is of the view that the vesting of the powers of regulating mergers and acquisitions in the TA is inappropriate, and accentuates the problem with sector specific application of the regulations to the telecommunications industry.

WIDE DISCRETIONARY POWERS OF TA UNDER EX POST REGULATORY REGIME

24. The current proposed *ex post* approach, where the TA reserves the power to take actions against mergers and acquisitions after the transactions close and complete if the TA considers such mergers and acquisitions to be anti-competitive, seems less intrusive. However as elaborated below, with the technical deficiencies and uncertainties of, and the overwhelming power reserved to the TA under, the proposed regulatory framework, although branded by ITBB as an *ex post* regime, the proposed regulation effectively remains an *ex ante* one.

³ <http://www.fcc.gov/Speeches/Powell/Statements/stmkp823.html>

⁴ Relationship between Regulators and Competition Authorities, OECD, 24 June, 1999

25. Given the high capital investment involved in any merger and acquisition of interest in the telecommunications business, regulatory certainty is tantamount to generating confidence in the integrity of the regulatory regime and promoting investment in the telecommunications market. Regulatory reviews, for this dynamic and converging industry, should only be conducted on a need-to-do basis and if done will have to be concluded reasonably swiftly in order to ensure that the economic efficiencies and the investment incentives and opportunities are not unnecessarily and unduly stifled or lost by any delay caused by regulatory reviews.
26. The regulatory framework proposed under the Bill lacks the comprehensive, clear and objective guidelines, which a transparent and effective regulatory framework should provide. Investors need such certainty in order to be able to make informed decisions as to whether pre-approval should be sought from the regulator (if based on their own assessment the merger and acquisition transaction is likely to be substantially lessening competition in the telecommunications market), or that the transaction can proceed without seeking pre-approval (if they decide it is unlikely to do so).
27. ITBB and the TA seek to provide comfort on these issues by arguing that the Bill reflects merger control regimes which have been in place in other jurisdictions for some time, such as Australia. However, the TA and ITBB fail to mention that, first, those merger control regimes are administered by general competition regulators, and second, that those regimes have come in for strong criticism for their uncertainty, unpredictability and distorting effects on rational business conduct. Hong Kong may well be adopting an overseas model which is likely to be substantially modified as a result of such criticisms.
28. First, the Business Council of Australia warned that small economies cannot necessarily afford to slavishly copy strict merger rules from much bigger economies:

“The size of the Australian economy creates an acute dilemma for the regulation of competition policy. Robust domestic competition is an important contributor to the

productivity and efficiency gains that deliver benefits for domestic consumers and businesses alike. It also underpins our international competitiveness. However, over-vigorous controls may deny firms in small, fragmented economies the economies of scale and scope needed to successfully compete and grow in global markets.”⁵

The same could be said of Hong Kong’s economy, as it is a city-based economy next door to Mainland China and is seeking to establish a prime position for itself amongst much larger regional and global economies.

29. Second, the Australian experience also shows that a highly discretionary merger control regime which is supposed to work ex post actually ends up operating ex ante. Although the Australian Competition and Consumer Commission (“ACCC”) has no formal merger clearance powers, informal ex ante clearance is sought from the ACCC for mergers of any significance, and often mergers which could not possibly have any impact on competition. As the standards are so vague, and as the ACCC is seen by the business community to lack accountability, few companies and their advisers are willing to risk proceeding without the ACCC’s prior approval. This has swamped the ACCC in unnecessary pre-merger clearance work.
30. While the proposed statutory pre-merger clearance process in the Bill is a step forward compared to the Australian situation, the Bill does not address many of the criticisms which have been made of pre-merger clearance processes, whether formal or informal. The Business Council of Australia commented on the pre-approval processes:

“..Problems are compounded by an opaque administrative process. If a firm disagrees with an ACCC (pre-merger) decision not to clear a proposed merger, its only option is to go ahead with the merger in the knowledge that the ACCC will almost certainly take court action. There is no other means of having the decision reviewed. This means that, as a practical matter, merger decision are rarely challenged, even where the proponent has strong advice that the merger would

⁵ Business Council of Australia Submission to the Review of the Trade Practices Act (9 July 2002) p. 71

breach the Act. The end result is inefficient commercial processes and unsatisfactory outcomes for the Australian economy”.⁶

The Business Council proposed that the ACCC should be required to publish detailed reasons for pre-merger clearance decisions. This would increase scrutiny and accountability of decisions and allow future merger parties to better predict the regulator’s attitude to mergers. The Business Council also proposed that merging parties should have the right to go straight to the Australian Competition Tribunal, the equivalent of the Competition Appeals Board, to seek approval for the merger. This would provide a more formal, disinterested avenue to review the appropriateness of a merger.

31. Hutchison is concerned that under the proposed Bill the powers which should be exercised by the Legislative Council will be transferred to the TA, an administrative authority. The guidelines, which aim to set out criteria⁷ the TA will consider in determining whether a change or proposed change has, or is likely to have, an anti-competitive effect, will not solve these concerns. The guidelines, which represent the crux of the regulations, are yet to be drafted, consulted upon or issued by the TA.
32. The guidelines can be changed at any time by the TA. Even if the Legislative Council has the initial guidelines before it when considering the Bill, there is no guarantee that the guidelines will not be changed in the future, thereby changing the basis or understanding the Legislative Council had when approving the Bill. The thrust of many of the submissions in Australia on the parallel Australian provision has been general agreement that the power of the regulator to set its own process and its own criteria for merger approval should be reduced and that more safeguards should be introduced into the legislation.

⁶ Business Council of Australia Submission to the Review of the Trade Practices Act 9 July 2002 p. 71

⁷ Such matters may include, for example, the availability of substitutes in the telecommunications market, entry barriers, market concentration, the degree of countervailing power in the telecommunication market, the dynamic characteristics of the telecommunications market (including growth innovation and product differentiation), the likelihood that the merger and acquisition would result in the removal from the market of a vigorous and effective competitor and the nature and extent of vertical integration in the market. (Legislative Council Brief, 3 May 2002, Paragraph 6(e))

33. The Consultation Paper had previously attached to it a set of Draft Guidelines which was far too general an analytical framework and did not adequately deal with the complexity of the task involved in merger and acquisition appraisal. Additionally the Draft Guidelines placed excessive emphasis on market share and concentration to the neglect of analysis on actual competitive conditions in the market under consideration. There is a danger that the TA may draw on the Draft Guidelines in developing the guidelines referred to in the Bill. If the guidelines howsoever drafted and developed are unclear, vague or incomplete, the interpretation and construction would in effect be left largely to the discretion of the TA. This will intensify regulatory intervention, and increase rather than decrease regulatory uncertainties and disincentives to investment.
34. The determination of whether there is an anti-competitive effect, although said to be gauged by reference to the guidelines mentioned above, remains ultimately a matter in the subjective opinion and at the discretion of the TA. Any subjective opinion of an individual, particularly one without the necessary expertise and experience in competition issues, which are largely economic principles, is susceptible to inconsistency and regulatory uncertainty. The Bill has also reserved wide discretionary powers to the TA by providing for the determination under the proposed Section 7P to be triggered at a threshold of as low as 15% of the beneficial ownership/voting control of the licensee.
35. In most overseas jurisdictions, the competition tests often are firmly and more objectively couched in widely accepted economic principles and anti-trust analysis that are explained comprehensively and in detail in guidelines to the industry and the public. This will ensure that subjectivity of the regulator, which inevitably creates regulatory uncertainty and inconsistency, will be minimised.
36. Further, the legislation does not specify a time by which the TA must consider and complete the review of the application for pre-approval of any merger or acquisition and form an opinion as to whether the pre-approval is to be granted. Nor does the legislation state the time beyond which the TA cannot reopen the completed transaction and look to challenge it on the basis of the powers granted to the TA.

37. On the above bases, Hutchison is concerned that the Bill represents a direct contradiction to the policy of light regulation pronounced by the TA and would request the Legislative Council, in the interest of healthy development of the telecommunications industry in Hong Kong, to consider abandoning the sector specific application of regulation of mergers and acquisitions proposed under the Bill.

OTHER COMMENTS ON THE BILL

38. ***Sub-section (12) of the Proposed Section 7P*** – It is proposed that a change of control will trigger review by the TA. The term “change of control” is very widely defined in the Bill to include a change of director or principal officer of the licensee, or if a person becomes the beneficial owner or voting controller of 15% or more of the voting shares in the licensee. In most instances, a change of director occurs for reasons unrelated to a change of ownership or control of the licensee. Hutchison fails to see how a change of director alone will have any impact on competition in the telecommunications market. Further, ownership and control of a shareholding interest does not raise competition concerns. A majority stake in a carrier licensee does not necessarily equate to anti-competitive behaviour, let alone a change of beneficial ownership/voting control of as low as 15%, which normally would not be regarded as a change of control. This wide net represents an undue and excessive regulatory intervention on the part of the TA. Take for example the concept of control under the Hong Kong Codes on Takeovers and Mergers. In that case, control is in the acquisition of a legal or beneficial interest or ability to control 30% or more of the voting shares in a licensee.
39. ***Sub-section (1) of the Proposed Section 7P*** – Sub-section (1) stipulates that the TA may direct the licensee to take such action as appropriate to eliminate the anti-competitive effect should he form an opinion that a completed merger and acquisition transaction has, or is likely to have, the effect of substantially lessening competition. The action may include the

procuring of modifications to the control of and the ownership of shares in the licensee. The power to “give consent subject to the direction that the carrier licensee concerned takes the action that the TA considers necessary to eliminate any such anti-competitive effect” goes too far. Rather than “elimination” of anti-competitive effect, it should suffice if the licensee takes the action the TA considers necessary to avoid substantial lessening of competition in a telecommunications market.

40. ***Sub-section (1) of the Proposed Section 7P*** – Another problem with Sub-section (1) is that no time limit is specified within which the TA will make the decision to revoke the merger transaction. Time limit should be set such that if the TA does not issue the direction within the time limit, the transaction should be deemed not to substantially lessen competition and no further action will be taken by the TA.

41. ***Sub-section (5) and (6) of the Proposed Section 7P*** - Although pre-approval can be sought by the licensee from the TA on a voluntary basis, sub-sections (5) and (6) do not specify the time line nor the approval procedures for obtaining such pre-approval. This further increases the uncertainties of the proposed merger and acquisition regulatory framework and thus disincentives to investment.

42. ***Sub-section (11) of the Proposed Section 7P*** - The licensee making the application for the pre-approval will have to bear the costs and expenses incurred by the TA in granting the pre-approval. No indication was given as to what such costs and expenses are likely to be and how much they will total. It is unreasonable for the Bill to grant unfettered rights to the TA to incur costs and yet look to recoup them from the relevant licensees. Particularly given that the licensees are already charged very high licence fees for the administration work carried out by the TA through OFTA and that the review of merger and acquisition transactions should logically form part of the normal administration of OFTA, it is inappropriate and improper to further impose such costs and expenses on the licensees.

CONCLUSION

43. For the reasons deliberated above, it is in fact for the sake of upholding and ensuring the competitiveness of the Hong Kong telecommunications market that Hutchison strongly urges the Legislatives Council to consider rejecting the sector specific application of regulation of mergers and acquisitions to the telecommunications industry.