Risk allocations in construction contracts

A Comparison of China's Standard Form of Construction Contract and FIDIC Conditions of Contract for Construction

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Abstract

Proper risk allocations in construction contracts can help reduce such impacts and achieve management efficiency. An analysis of the risk allocations in FIDIC Conditions of Contract for Construction in contrast with China's Standard Form of Construction Contract reveals that, while a number of risk allocation principles are theoretically correct, more realistic considerations should be made of risk allocation in the construction contract, i.e. language clarity and the particular contextual construction culture.

Keywords

Risk allocation, FIDIC Contract Form, Chinese Model Construction Contract

Introduction

Risk can be defined from different perspectives and practically refers to "an event or set of circumstances that, should it occur, will have an effect on the achievement of the project's objectives"(Simon, Hillson and Newland, 1997, p16). Construction projects, due to their unique nature, involve quite a number of interacting activities that are full of risks, each of which may exert impacts, to some extent, upon the cost, time and quality. For a project to be successful, a sound risk management system is required that usually comprises identification, analysis and response (Burke, 2003) so that when the risks do eventuate they can be overcome. Thus, one of the main tasks of all the project participants, including employers, contractors, professional advisors and subcontractors, is to identify the discrete sources of risk, develop a risk management strategy as part of their risk management system (Flanagan and Norman, 1993) and also cultivate the capability of carrying out such. The risk management strategy, from a contractual perspective, is to allocate the risks, in the contracts, among the parties in such a way as to enable risks to be managed efficiently and effectively throughout the construction process.

In the past two decades, risk management scholars, and practitioners as well, have been making great efforts in generalizing the risk allocation principles that facilitate producing the best possible project outcome. A number of researchers have discussed the general principles on risk allocation in construction, for example, Abrahamson (1973), Ashley (1977), Barnes (1983), Ward, Chapman and Curtis (1991), Cheung (1997). The five theoretical principles proposed by Abrahamson are first recognized in construction, i.e. a risk shall be allocated to the party:

- if the risk is of loss due to his own wilful misconduct or lack of reasonable efficiency or care;
- if he can cover the risk by insurance and allow for the premium in settling his charges, and it is most convenient and practicable for the risk to be dealt with in this way;
- if the preponderant economic benefit of running the risk accrues to him;
- if it is in the interests of efficiency to place in the risk on him; and
- if, when the risk eventuates, the loss happens to all on him in the first instance, and there is no reason under any of the above headings to transfer the loss to another, or it is impracticable to do so.

This paper intends to examine and compare two standard construction contracts- FIDIC Conditions of Contract for Construction (the New Red Book) and China's Standard Form of Construction Contract- from a risk-allocation perspective, and offer some suggestions on enhancing risk allocation theories. It is noted that, although the New Red Book is for an international setting and the China's Standard Form for a domestic setting, they are basically similar in nature. Both (a) are prepared by a somewhat neutral contract committee; (b) have a role of "Engineer" who acts fairly for contract administration; and (c) are intended for "construction" with only little or no design responsibility on the part of the contractor. As a matter of fact, the New Red Book is not a "pure" international form because, with some or even minor modifications, it can also be used on domestic contracts. Thus, such similarities merit a comparison between these two forms, particularly in terms of risk-allocation.

FIDIC Conditions of Contract for Construction and China's Standard Form of Construction Contract

FIDIC Standard Forms of Contracts

FIDIC, as an international organization, is best known for its publications of high-quality standard contracts for the international construction contracting industry. In 1999, FIDIC published a new suite of standard forms of contracts that consists of:

- Conditions of Contract for Construction (The New Red Book)
- Conditions of Contract for Plant and Design-Build (The New Yellow Book)
- Conditions of Contract for EPC Turnkey Projects (the Silver Book)
- Short Form of Contract (Green Book)

These standard forms are recommended by FIDIC for general use based on international tendering under different settings, among which the New Red Book (hereinafter called alternatively "the FIDIC Form") is used for engineering works designed by the Employer, or by the Engineer on the Employer's behalf. Under the framework of this type of contract, the Contractor constructs the works in accordance with the design provided by the Employer, except for some detail design, such as shop drawings. The New Red Book is envisaged for application in civil, mechanical, electrical and construction works. Under the general structure of the Red Book, there are Contract Agreement, Letter of Tender, General Conditions of Contract, and Particular Conditions of Contract. The General Conditions of Contract, which are the core of the standard form, consist of twenty clauses that deal with the obligations, rights responsibilities and risk allocations of the parties concerning contract price/ payment, quality and schedule, and the procedures for claim and dispute resolutions.

Shortly after they were published, the above new standard forms received a lot of attention and thought-provoking comments from quite a number of authors. For example, Seppala (1999 and 2000) explained the thinking behind the basic allocation of risk as dealt with mainly in Clause 17 - Risk and Responsibility and Clause 19 -Force Majeure, and stated that the principles are essentially unchanged from those in the old Red Book. Jaynes (2001) discussed in detail the termination, risk and force majeure issues, noting that there might be disagreement over the meanings of some wordings in the relevant clauses. Bunni (2001), prompted by Seppala, responded with a critique of Clauses 17 and 19, pointing out what he argued to be "problems" regarding the meaning of "Employer's Risks", ordering of the provisions and newly introduced concept "force majeure". All these comments and critiques, whether perfectly justified or not, do contribute greatly to a better understanding of the intricate logics of the contract language, particularly on the risk allocation issues.

China's Standard Form of Construction Contract

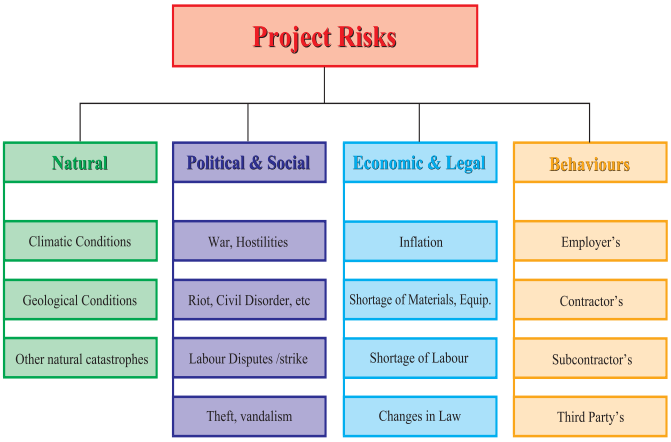
The first edition of China's Standard Form of Construction Contract (GF-91-0201, hereinafter called "China's Standard Contract") was published in 1991, which was used for construction projects nationwide. In the past ten years, the Chinese construction industry has been developing very fast. Some fundamental construction laws, such as Building Law, Tendering Law and the Contract Law, have been laid down to regulate the construction industry in recent years. The change and development of the Chinese construction industry made it necessary to modify the first edition of the model contract. In 1999, the second edition of China's Standard Contract was prepared by a contract committee which consisted mostly of consultants and government officials that held a neutral position among employers, contractors, consultants and scholars, and published jointly by the Ministry of Construction of China, in conjunction with China State Administration for Industry and Commerce, to supersede the first edition with reference to standard contract forms, including the FIDIC forms. Similar to the New Red Book, China's Standard Contract consists of three parts: Contract Agreement, General Conditions and Particular Conditions. China's Standard Contract have also been studied and commented on by many Chinese scholars on its features (e.g., Li and Zhu, 2000), risk prevention (e.g., Zhao and Zhang, 2001) and claims (e.g., Lou and Zhen, 2003) under this standard contract; however, no papers have been found to study the principles of the risk allocation in this contract.

Categorization of Construction Risks: A Framework

For the purpose of risk analysis, researchers have developed various risk categorization framework. Zhi (1995) classified construction risks into four levels: Nation/ region; construction industry, company and project levels. Under these four levels, a subdivision is made, such as political, economic, market, physical risks, etc.. Edwards and Bowen (1999) identified risk first into two basic categories: Natural and Human. The natural risk is subdivided into weather and geological risks; the human

risk is subdivided into 9 types, such as social, political, economic, legal, cultural, etc.. Han and Diekmann (2001) list five categories of risk: political, economic, cultural legal, technical/construction and other risks, which are further sub-divided. Based on this categorization and for the ease of comparison, a categorization framework is developed, as illustrated in Figure 1.

Figure 1 Risk Categorization Framework



Risk Allocations in the Two Standard Contracts

To go with the above risk categorization framework, discussions of the risk allocations in the two standard contracts are made in the same order as listed in the framework.

Risk Allocation under the FIDIC Form

Natural Risks

There are several clauses in FIDIC Conditions of Contract that deal directly with the natural risks. Sub-clause 8.4 specifies in express terms, that risks concerning the climatic conditions are shared between the Employer and the Contractor, in that the Employer shall allow an extension of time (EOT) if exceptionally adverse climatic conditions affect the Contractor's construction progress. This also implies that the Contractor shall bear the relevant costs incurred by him due to such risks. It also implies that under "normal" adverse climatic conditions, such rainy or cold days, the Contractor shall bear the corresponding responsibility. However, according to Sub-clause 17.3- Employer's Risks, and Sub-clause 17.4- Consequences of Employer's Risks, the Contractor shall be entitled to an EOT and cost compensation in case of "unforeseeable natural forces", which may include some climatic conditions, particularly when such forces turn out to be the catastrophes, such as typhoon, hurricane, etc under Sub-clauses 19.1- Definitions of Force Majeure and 19.4- Consequences of Force Majeure. Concerning geological conditions, Sub-clauses 4.12- Unforeseeable Physical Conditions and 4.24- Fossils specify that the Contractor shall be allowed an EOT and compensated for the costs incurred from such risk events. However, the term "unforeseeable conditions", which are of an ambiguous nature, blurs the division of risks between the Employer and the Contractor. Other natural catastrophes, which are extreme natural events, such as earthquakes and volcanic activities, are also mostly allocated to the Employer under Sub-clauses 19.1 and 19. 2. It can be seen from the above analysis that the natural risks are basically shared by the two parties under FIDIC Form. Regarding "extreme" natural catastrophes, the Employer takes most of the consequences, i.e., EOT and additional cost with the Contractor taking the loss of profit; however, the Contractor takes most of the consequences, i.e., additional cost uncompensated and loss of profit, with the Employer taking the risk of EOT, relating to exceptionally adverse climatic conditions; as for "normally" adverse climatic and geological conditions, the Contractor takes almost all the consequences except for the ones that are justified to be "reasonably unforeseeable by the Contractor by the date for submission of the Tender(Sub-clause 1.1.6.8)".

Political and Social Risks

Under Sub-clause- 17.3 Employer's Risks and Clause 19- Force Majeure, most of the political and social risks are basically allocated to the Employer, such as war, civil commotions, disorders and strikes. In case of occurrence of such risk events that impact the Contractor's project execution, the Employer shall both allow an EOT and pay cost compensation (but no profit) to the Contractor. Some social risks, such as theft and vandalism, are allocated to the Contractor under the FIDIC Form. Although these are not expressly stated under FIDIC Form, it can be inferred from Sub-clause 17.2 Contractor's Care of Works, in which it is stated that the Contractor shall take the responsibility for the care of the Works and the Goods during the construction period, and that the Contractor shall rectify the loss or damages at his own cost and risk.

Economic and Legal Risks

Economic risks occur frequently during construction period, particularly the fluctuation of prices of materials, labour and equipment. Under Sub-clause 13.8, an adjustment formula is given to deal with this issue:

$$P_n = a + b\frac{L_n}{L_o} + c\frac{E_n}{E_o} + d\frac{M_n}{M_o} + \ldots..$$

This formula applies both to the rise and fall of the prices. Pn is the adjustment multiplier; "a" is a fixed coefficient; "b" , "c", "d"... are coefficients representing the estimated proportion of each cost element; "Ln", "En" and "Mn"... are the current cost indices or reference prices for period "n" while "Lo", "Eo" and "Mo"...are the base cost indices on the Base Date, which is defined as "the date 28 days prior to the latest date for submission of the Tender(Sub-clause 1.1.3.1)". The fixed coefficient "a" represents the non-adjustable portion in the contractual payments. Such a provision indicates that the risk of inflation is shared between the Employer and the Contractor. Shortage of labour, materials and equipment is also dealt with under the FIDIC Form to some extent; if such shortage is reasonably unforeseeable, the Contractor is entitled to an EOT under Sub-clause 8.4. However, under Sub-clauses-4.1 and 6.1, it is the Contractor's obligation to "provide all Contractor's personnel, Goods..." and the Contractor shall "make arrangements for the engagement of all staff and labour... and for their payment...". It can be inferred from such provisions that the Contractor shall bear all the consequences of the risks of unavailability of the required personnel, materials and equipment, except for allowed EOT in case of unforeseeable shortage. Legal risks refer to the changes in legislation or introduction of new laws after the Base Date of the contract. It is provided that in Sub-clause 13.7-Adjustments for Changes in Legislation that the Contractor is entitled to an EOT and additional cost caused as a result of the changes in the laws. Therefore, under FIDIC Form, such legal change risks are basically retained by the Employer.

Behavioural Risks

Behavioural risks are defined in this paper as those caused by one party's action or inaction that adversely impacts the project or other parties. Risks caused by the behaviours of the parties under the FIDIC form are summarized as follows:

Employer's Behavioral Risks (including Engineer's)

- Late giving possession of Site (2.1)
- Non-notification of financial arrangements upon request (2.4)
- Delay in payment (14.8, 16.2)
- Unreasonably withholding permissions or certificates (1.3)
- Defects in design drawings(17.3)
- Occupation of the Works (17.3)
- Notifying incorrect setting-out data (4.7)
- Late issuance of design drawings or instructions (1.9)
- Late attendance to tests or inspections (9.2)
- Interference with tests on completion (10.3)

Contractor's Behavioral Risks

- Labour injuries and accidents (4.1)
- Improper interference with the convenience of the public (4.14)
- Damage caused by transportation of goods (4.16)
- Acts or defaults by subcontractors (4.4)
- Defects in Materials, Plant and Workmanship (7.1, 7.5)

Risks Caused by Third Party's Behaviours

- Unauthorized entry (4.22)
- Delay caused by Authorities (8.5)

Under the FIDIC Form, the Employer is responsible for his own behavioural risks, including the risks of Engineer who acts on the Employer's behalf, and the Contractor is responsible for his own risks, including those of the Sub-Contractor, as between the Employer and the Contractor, except for Nominated Subcontractor.

Risk Allocation under China's Standard Contract

Compared with the FIDIC Form, China's Standard Contract is rather short and concise. This characteristic is also reflected in its risk allocation clauses. Some risks dealt with in the FIDIC Form are even left unmentioned. The following is a brief summary of risk allocations in China's Standard Contract.

Natural Risks

Climatic risk events are not dealt explicitly in China's Standard Contract; however under Sub-clause 13.1and Clause 39 Force Majeure, the Contractor shall be granted an EOT if some natural catastrophes, such as avalanche, floods and typhoon, occur that impact the project progress. Force Majeure events may also include strong wind, heavy rain and snow if agreed by both parties in the Particular Conditions of Contract under some circumstances, which is expressly stated under Sub-clause 39.1 that offers the definition of force majeure for construction contracts under the Chinese legal system; such a definition is also generally supported by Chinese law scholars(e.g., Wang, 1995, and Liu and Zhang, 2000). Other catastrophes are also covered under Sub-clause 13.1, such as earthquake and volcanic activities. Regarding geologic conditions, the Employer shall provide geologic data and existing sub-surface piping system of the construction site and shall be responsible for the accuracy of such data. If, due to the inaccuracy of such data, the Contactor incurs additional costs and/or suffer from delays, the Employer shall compensate and grant an EOT accordingly (8.1 and 8.3).

Political and Social Risks

These risks are very much less dealt with directly. In case of occurrence, several clauses can be applied; 1.22 Definition of Fore Majeure and Clause 13-Schedule Delay-cover some political risk events, such as war, riot, etc., in which case the Contractor shall be allowed an appropriate EOT and share the relevant costs with the Employer. Social risk events are covered under Clause 9, which requires the Contractor to be responsible for site security by providing lighting and fencing to prevent possible thefts and vandalism (9.1).

Economic and Legal Risks

Sub-Clause 23.2 specifically deals with these risks. It is provided that the contract price can be adjusted when it is impacted by the following circumstances:

- Changes in law
- Changes in administrative regulation
- Changes in government policies
- Changes in the price indices as published by the construction cost authorities

It can be seen from such provision that the Employer shall, in general, bear the risk of price fluctuation. No mention is made of the shortage of equipment, materials and labour in China's Standard Contract. This may be due to the thinking style of the Chinese construction culture in that in the domestic market, such shortage is unlikely to occur. All these should be available in the current Chinese construction market. It is just a matter of price fluctuation for procuring these supplies. Introduction of such "shortage" concept into the contract may lead to complication and confusion.

Behavioural Risks

The behavioral risks of the parties are listed as follows:

Employer's Behavioral Risks(including Engineer's)

- Late or incorrect instructions from Engineer on behalf of Employer(6.2, 6.3, 16.4)
- Employer and/or third party caused emergent remedy (7.3)
- Land requisition (8.1)
- Late or failure to provide drawings or meet commencement requirements as agreed(13.1)
- Late payment (13.1, 24, 26.4)
- Failure to provide instruction or approval (13.1)
- Disturbance of Contractor's normal working on site (16.3)
- Interference with inspection for acceptance or taking-over (17.2, 32)

Contractor's Behavioral Risks

- Contractor caused accidents and casualties (22.1)
- Improper interference of the public (9.1)
- Acts or defaults by subcontractors (38.3)
- Environmental protection (9.1)
- Quality defects (15.1)

Risks Caused by third Party's Behaviour

- Suspension of delivery of water, electric power and gas by utilities Authorities (8.5)

Under China's Standard Contract, the Employer is responsible for both his and the third party's risks as listed above, while the Contractor is responsible for his own.

Comparison and Discussion

Although the risk allocations are not totally the same under the two construction contracts, they are, for the most part, consistent with the first risk allocation principle concerning the behavioural risks. For example, the Employer and the Contractor are responsible for their respective behavioural risks. This echoes the principle that each party shall be responsible for their misconduct or lack of care (Principle 1); however, under both the FIDIC Form and China's Standard Contract, the Employer is responsible for a risk caused by Authorities. This may be due to the fact that it is impracticable, if not impossible, for the Contractor to insure against such a "unforeseen" event. In an international setting where the FIDIC Form is intended for use, the Employer, which, in some cases, is the local government or entity, is more efficient in coordinating with such third party's interfering behaviour (Principle 4). As for China's Standard Contract which is for domestic use, the provision may be due to the " Chinese construction culture", in that the Employer, as a traditional practice, provides water, power and access road for the Contractor to commence the site work as part of the Employer's contractual obligation as stated by Clause 8- Work of the Employer- in China's Standard Contract. Thus it seems logical for the Employer to be responsible for the shut-off of water and power supply for a continuous period of time.

Concerning natural risks, both the FIDIC Form and China's Standard Contract advocate the sharing of the risk but the specific division principle is different to some extent. For example, under FIDIC Form, occurrence of exceptionally adverse climatic conditions allows the Contractor to extend the completion time and implicitly the Contractor is responsible for the incidental costs. China's Standard Contract is silent on this. In the extreme cases under force majeure, the Contractor is entitled to both EOT and financial

compensation under both the FIDIC Form and China's Standard Contract (Clause 19 of the FIDIC Form and Clause 39 of China Standard Contract); however, under the latter, such compensation is only limited to the repair of the damaged permanent work while the Contractor is responsible for the injury and damage of his own personnel and construction equipment (Clause 39 of China Standard Contract), implying that the Employer and the Contractor share the risks under force majeure. China's Standard Contract is very clear in allocating the geological risk by stating that the Employer is responsible for providing the geological data and for its accuracy (Clause 8). This clear-cut contractual language helps reduce the dispute between the two parties. However, the FIDIC Form uses very vague language in allocating such geologic risk.

It might be argued that, if the geologic risk is completely allocated to the Employer as is the case under China's Standard Contract, the Contractor, who directly undertakes the construction work may lose motive to take active and positive measures and precautions to deal with the geological conditions, thus reducing its work efficiency; however, at the tendering stage, the Employer (or the Engineer on his behalf) should be more knowledgeable of the site conditions than the Contractor and is "the Party who has the most information to forecast the risk (Cheung, 1997, pp16-26)". The FIDIC Form, however, attempts to strike a balance by stating that, on the one hand, the Employer is not responsible for the accuracy of the site data provided by him and the Contractor is responsible for its interpretation (4.10); and that, on the other hand, the Employer is only responsible for such geologic risk if such risk event is reasonably unforeseeable by the Contractor at the tendering stage (4.12). While this may, theoretically, make the Contractor take initiative in dealing with the geologic problem encountered, the intention to prove such a risk event was unforeseeable by him at tendering stage in order to rely on such contractual language to claim against the Employer may reduce his initiative and even result in his inaction, thus contrary to FIDIC's original intention, such ambiguous language is more likely to lead to frequent disputes that consume a lot of unnecessary efforts by both parties. Further, such provision might discourage the Employer from providing the best possible accurate data, or even result in the Employer's concealing the negative site conditions for eliciting low bids, despite the request of the Employer to make available all data to the contactor (4.10). The fact that disputes in international contracting occur rather frequently suggests the "inefficiency" of such ambiguous contractual language. It can also be seen that, while the three principles (3, 4, 5) listed above are theoretically correct in enhancing work efficiency, there may exist a variety of specific contractual languages purporting to achieve efficiency. It is argued here that language clarity may be a more specific and practical principle in risk allocation and may overweigh the seemingly reasonable but ambiguous language that may result in frequent disputes.

Social risks, such as theft and vandalism, are borne by the Contractor under both the contracts. This is consistent with the principles (3 and 5) in that such losses happen to the Contractor in the first instance and it seems to be more efficient for the Contractor to take care of the site security, as specified in the two contracts. For the political risks, such as war, riot and strike, the FIDIC Form is seen as pro-Contractor, in that the Contractor is entitled to EOT and compensation caused by occurrence of such external events (19.4). China's Standard Contract stands somewhat neutral in dealing with the political risks. The Contractor is entitled to EOT under such risks but shares the costs with the Employer, i.e. the Contractor shall bear the costs for injuries and damage of his site personnel and construction equipment and the Employer shall bear other costs, such as repairing the permanent works and clearance of site debris (39.3), as the Contractor is in a better position to "control" their own properties under such events. Sharing such political risks is conducive to motivating both parties to make efforts to mitigate losses caused by such political risks.

Under both the FIDIC Form and China's Standard Contract, economic and legal risks are mostly retained by the Employer, by means of clear contractual language. Such clear language helps reduce disputes in dealing with price adjustment regarding legal changes and price fluctuations.

Lastly, force majeiure, as one of the importance topics in risk management, merits special attention.

Conclusion

Theoretically, sound risk allocation should achieve management efficiency and reduce the transaction costs in the construction contacting business. While this is clearly uncontentious, such a principle presupposes an atmosphere of trust between contracting parties and a clear mutual appreciation of project risks (Ward, Chapman and Curtis, 1991), which, under the current competitive market environment, the more complex project financing structure and the attitudes of the parties towards risks, seldom exists. The existing theoretical principles might be complemented with more realistic considerations: clarity in allocating the risks so that such risks can be reasonably priced, and the traditions of that particular construction sector.

References

Flanagan, Roger & Norman, George (1993). *Risk Management and Construction*. London: Blackwell Scientific Publications

Abrahamson, M (1973). Contractual Risks in Tunneling: how they should be shared. *Tunnels &Tunneling*, Nov. pp 587-598

Ashley, D. B. (1977). *Construction Project Risk Sharing*. Stanford University, Technical Report.

Barnes, N. M. L. (1983). How to Allocate Risks in Construction Contract. *International Journal of Project Management*, Vol 1 No 1. 24-28

Ward, S.C., Chapman C.B. and Curtis, B. (1991). On the allocation of risk in construction projects. *International Journal of Project Management*, Vol 9 No 3. 24-28

Cheung, Sai-On (1997). Risk Allocation: An Essential Tool for Construction Project. *Journal of Construction Procurement*, Vol. 3 No. 1. 16-26

Zhi, H (1995) Risk Management for Overseas Construction Projects. *International Journal of Project Management*, 13(4), 231-7

FIDIC(1999). *Conditions of Contract for Construction*. Lausanne

Ministry of Construction, P.R.C. (1999). *Model Construction Contract*. Beijing (in Chinese)

Simon, P., Hillson D. and Newland (1997). *Project Risk Analysis and Management Guide*. Norwich Norfolk: The Association for Project Management.

Seppala, C.R. (1999). *Risks, Force Majeure and Termination*. Presented in the Seminar "FIDIC's Four New Standard Forms of Contract", London, Friday, December, 1999.

Seppala, C.R. (2000). FIDIC's New Standard Forms of Contract-Force Majeure, Claims and Disputes and other Clauses. *International Construction Law Review*, Vol 17, pt. 2.

Jaynes, G. L. (2001). *Termination, Risk and Force Majeure*. Presented at the Seminar "FIDIC Global Conditions of Contract", New Delhi, January.

Bunni, N. G. (2001). FIDIC's New Suite of Contracts-Clauses 17 to 19 Risk, Responsibility, Liability, Indemnity and Force Majeure. *International Construction Law Review*, Vol 18, pt. 3.

Li, Q. and Zhu, X. (2000). An analysis of the Features of China's Standard Form of Construction Contract and Its Application. Building Economics, Issue 8, 14-16 Zhao, Z. and Zhang, H. (2001). Analysis and Prevention of Risks under Construction Contracts-A Contractor's Perspective. Building Economics, Issue10, 18-20 (*in Chinese*)

Lou, Y. and Zheng X. (2003). Validity Period for Claims under Construction Contracts. Building Economics, Issue 7, 41-43 (*in Chinese*)

Burke, R. (2003). Project Management-Planning and Control Techniques (Fourth Edition). Chichester: John Wiley & Sons Ltd.

Wang, Li (1995). On exception from Liability under Force Majeure. *Journal of Gannan Normal University*, Issue 5, 17-19 (*in Chinese*)

Liu, K.X and Zhang H.X. (2000). On the Principles of Force Majeure. *Law Reseach*, Issue 6, 107-118 (*in Chinese*)

Refinements to the land application list system recommended

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In November 2002 when the gloomy property market continued to deteriorate, the government decided to gradually suspend all the scheduled land auctions in order to halt the collapsing property market. Since 2004 new land supply from the government has been triggered from the "Application List" system only.

The local economy started to recover in July 2003, with considerable GDP growth recorded during the subsequent years. However, only nine parcels of land were sold by the land Application List system in 2004 and 2005 after the termination of scheduled land auctions came into effect. The quantity of land being sold was much lower than the average amount of the preceding years

Short coming of the existing system

The unfavourable response may be attributable to developers' market strategies. Or perhaps it is a reflection of developers' conservative attitudes towards the property market during times of escalating interest rates.

Under the existing system the government is poised in a rather passive position in that the new land supply only hinges on the attitude of the buyer. Less auctions triggered means less land available in the market. A suspicion about property supply shortage may be created in the general public, causing social unrest. Both the government and the developers may be condemned for joint intervention in the free market so as to cause escalation in property price levels, although the market may operate in an opposite way to the contrary.

On the other hand, developers may take advantage of the new system by triggering a particular land auction before launching their project sales in the market. It has been a special market phenomenon in Hong Kong that once a piece of land is sold with a favourably high price, the estimated price levels of the unfinished units of the relevant development, will become benchmark price levels for the

market. With high-profile media coverage, prospective home buyers may be tempted to firm up purchase decisions within a short period of time in light of escalating price levels.

Land sales revenue is considered uncertain under the Application System, as the government is unable to predict which land parcel will be applied, by which developer and at what time. Since revenue from land sales has long been a main source of government revenue, unpredictable land sales revenue would be a threat to the financial stability of the government.

Recommendation

For the purpose of removing uncertainty about future land supply whilst maintaining a flexible land disposal system, it is suggested the government resume regular land auctions in parallel with the Application List system. In particular, the Lands Department should allocate a certain percentage of land disposal through scheduled land auctions, but subject to periodic reviews to be in line with the local economic conditions.

So far as land supply is concerned, the government's prime role should be to provide sufficient and suitable development land in order to meet the demand from different sectors of society. Regular land auctions would facilitate predictable future property supplies such that forward planning is possible for different market sectors to cater for the demands associated with the economic and population growth.

The Application List system operates on a market-driven basis. In an upbeat market atmosphere where there is not enough land put up by regular scheduled land auction, developers who find it lucrative to take up a development project can trigger land auctions and acquire new land for development. Developers can acquire the necessary land reserve whilst generous public revenue is forthcoming.

With regular land sales available, developers can forward plan their housing production, matching the projected supply and demand in the market. This will help to stabilize property price levels. More land sales, whether regular or not, will create more market information as the benchmark price levels. With the knowledge of future property supplies, prospective home buyers will have more information to consider and they are in a position to make house purchase decisions properly.

For the sake of efficient market operation, it is important for government to maintain a clear and flexible land supply system. Market players including the developers and home buyers will be more confident in investing in the local market with a more transparent land supply figure. On the other hand, the government would maintain the revenue income from land sales at a relatively stable level when a scheduled land sale program is in place.

Government land sales since 2004 through the "Application List" system

Date	User	Address	Price (HKD Million)
25-May-04	Residential R2	3-4 Tung Lo Wan Shan Road	865
25-May-04	Residential R2	Sui Tai Road / Ning Tai Road	2,090
15-Jun-04	Residential R1	Sa Po Road, Kowloon City	1,010
12-Oct-04	Residential R1	Ex-Tin Kwong Road Police Married Quarters	9,420
12-Oct-04	Residential R1	Prince Edward Road East	4,700
22-Feb-05	OU (Business Zone)	Sheung Yuet Road / Wang Chiu Road	1,820
Total			**19,905**
27-Sep-05	Non- Industrial	Hoi Ting Road, West Kowloon Reclamation Area	3,190
27-Sep-05	Non- Industrial	Hoi Wang Road / Hoi Ting Road	2,730
27-Sep-05	Residential R2	Fung Shing Street., Ngau Chi Wan	4,230
Total			**10,150**

Remarks: In the fiscal year 2004-2005, the total land revenue was 31.3 billion in which 19.91 billion came from land auction.
In the fiscal year 2005-2006, the estimated total land revenue is 32.0 billion, whereas three pieces of land have been sold for 10.15 billion by auction.

Housing supply in 2006

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Of the two, housing supply always has a more concrete base for estimation than demand. After all, it takes time to build and it involves, literally, concrete.

Private Housing under Construction

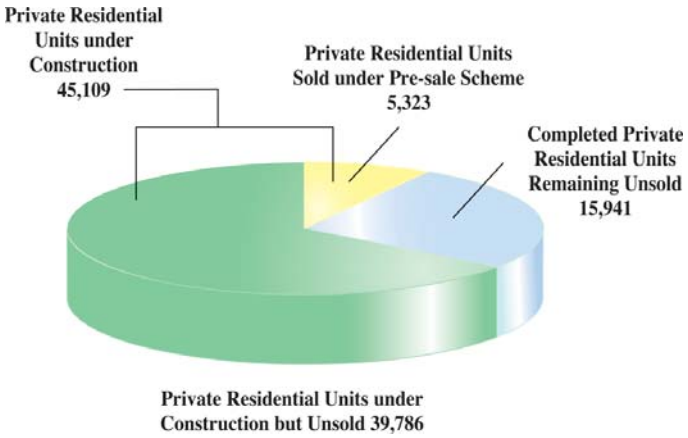
To forecast private housing supply let us first start with units now under construction. From our estimate, at the end of 2005, private residential units under construction amounted to 45,109, in which 5,323 have been sold. That leaves an estimate of 39,786 units available for sale in the market until 2008. See Chart 1.

As seen from Table 1 below which follows the Rating and Valuation Department's area division, the New Territories has the largest share of 24,101 (or 60.6%) unsold units.

Table 1 Distribution of Private Residential Units under Construction at the end of 2005*

District	Units under Construction	Sold Units	Units under Construction but Unsold
Central and Western	1,842	331	1,511
Wan Chai	1,576	246	1,330
Eastern	422	0	422
Southern	715	0	715
Hong Kong	4,555	577	3,978
Yau Tsim Mong	4,559	230	4,329
Sham Shui Po	2,734	580	2,154
Kowloon City	3,236	137	3,099
Wong Tai Sin	1,915	0	1,915
Kwun Tong	210	0	210
Kowloon	12,654	947	11,707
Kwai Tsing	924	0	924
Tsuen Wan	4,194	0	4,194
Tuen Mun	0	0	0
Yuen Long	6,837	102	6,735
North	1,264	468	796
Tai Po	181	0	181
Sha Tin	4,395	405	3,990
Sai Kung	7,350	2,824	4,526
Islands	2,755	0	2,755
New Territories	27,900	3,799	24,101
Total	45,109	5,323	39,786

Chart 1 Number of Completed Private Residential Units and Those under Construction at the end of 2005*



They mainly come from large developments in Yuen Long (Tin Shui Wai Area 24 and Yoho Town), Sai Kung/Tseung Kwan O (Metro Town and Dream City) and Tsuen Wan (Town Centre Redevelopment and Park Isalnd in Ma Wan). Tuen Mun, on the other hand, has no new units under construction and, therefore, no units for sale at least until 2008.

From the above, Kowloon has an estimated 11,707 units under construction. More significant developments in Kowloon include Kowloon Station Development Phases 5 to 7 and Nos. 220 to 222 Tai Kok Tsui Road in Yaumati/ Tsimshatsui/Mongkok, Grand Waterfront and Tin Kwong Road in Kowloon City, among others.

In Hong Kong Island, the perennial low supply continues. New developments mainly concentrate in the URA redevelopments in Central/ Western district and Wan Chai.

Housing Supply in 2006

More immediate concern, of course, is how many of them will be completed this year. The total number is anticipated to be 17,210. For ease of reference we list them in Table 2.

Again Hong Kong Island has the least supply, providing only 1,765 units or a meagre10%. Kowloon's share mainly comes from large developments in West Kowloon and

Table 2 Estimated Completion of Private Residential Units in 2006*

District	Private Residential Development	Number of Units	District Total
Central and Western	33 Ka Wai Man Road	89	904
	60 Victoria Road	73	
	The CentreStage	388	
	419K Queen's Road West	78	
	3 Gough Hill Path	5	
	2,2A Aberdeen Street / 2-4 Tung Wah Lane	77	
	30 & 30B Bonham Stand	5	
	1 Peak Road	2	
	1 High Street	95	
	31 Robinson Road	84	
	6 & 10 Black's Link	8	
Wan Chai	Wan Chai Road / Tai Yuen Street Redevelopment Project Phase 1	480	856
	The Legend	376	
Eastern			0
Island South	120 Stanley Main Street	5	5
Hong Kong Island (Total)		1,765	1,765
Yaumati/ Tsimshatsui/ Mongkok	18 Tak Hing Street	108	2,097
	Harbour Green	1,514	
	43-51A Tong Mi Road	92	
	Hanoi Road Redevelopment Project	383	
Sham Shui Po	Manhattan Hill	1,100	1,818
	One Silversea	700	
	201-203 Castle Peak Road	18	
	Grand Waterfront	1,782	
Kowloon City	15 Ho Man Tin Hill Road	69	2,073
	8 Devon Road	1	
	2 Norfolk Road	1	
	8 Essex Crescent	1	
	Mount Beacon	219	
Wong Tai Sin	Sa Po Road Project Phase 1	216	235
	51-53 Sa Po Road	19	
Kwun Tong			0
Kowloon (Total)		6,223	6,223
Kwai Tsing			0
Tsuen Wan	116-122 Yeung Uk Road	450	1,750
	Park Island Phases 5 & 6	1,300	
Tuen Mun			0
Yuen Long	Ping Shan Ping Ha Road	49	2,103
	Seasons Place	104	
	Tin Shui Wai Area 24	1,950	
North	Royal Green Phase II	282	1,046
	Noble Hill	764	
Tai Po	The Beverly Hills Phase 2	163	181
	4280 Tai Po Road -Tai Po Kau	18	
Sha Tin	The Grandville	424	424
Sai Kung	The Grandiose	1,472	3,148
	Metro Town Phase 1	1,676	
Islands	Nga Ka Wan, Lamma Island	14	570
	Cheung Sha Project, Lantau	26	
	Discovery Bay - Chianti	530	
New Territories (Total)		9,222	9,222
Overall		17,210	17,210

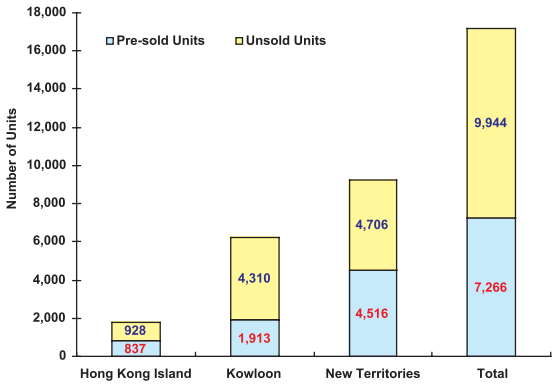
Kowloon City. The spread in the New Territories is uneven. Sai Kung/ Tseung Kwan O has the largest supply with Yuen Long and Tsuen Wan not far behind. Conversely, Sha Tin and Tai Po have limited supply and Tuen Mun, as described above, has none at all.

Pre-sold Units

Despite considerable supply in some districts, as seen from Chart 2, one must note that 7,266 (or 42.2%) of the units completed in 2006 have already been pre-sold, including those in heavy supply districts such as Tseung Kwan O. Those available for first sale are, therefore, considerably less.

Of course, it is hard to predict how the property market will fare without also looking at the demand side. And it is always hard to forecast how many units will be taken up over the year.

Chart 2 Pre-sold and Unsold Private Residential Units Completed in 2006*



* Source of Information: Research Department, Midland Realty.

Barring unforeseen circumstances, it is reasonable to suggest that the take-up rate should follow that of last year, i.e. around 20,000, and that a tight demand-supply situation will continue.

The above is a rough estimate. After all, as John Maynard Keynes used to say, it is better to be roughly right than to be precisely wrong.