SOLVING THE PROBLEM OF BUILDING DILAPIDATION IN HONG KONG

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ABSTRACT

The problems of building dilapidation in Hong Kong are growing rapidly, so building rehabilitation has become a matter of great urgency. To tackle this problem, a maintenance reserve should be established in each multi-ownership building. Yet, difficulties may arise in raising money for such a reserve for many buildings, so this paper proposes to use the concept of transferable development rights to ease the cash flow hitch.

Key words: Built environment, Cost modeling, Maintenance.
Introduction

While Hong Kong has long been praised as a dynamic and prosperous city, its dark side has seldom been unveiled. At present, there are around 42,000 private buildings territory-wide (1), and high-rise apartment buildings constitute the majority of these. Given Hong Kong’s small area (about 1,100 square kilometers), these high-rise developments characterize the city as a highly compact living environment. However, about a quarter of these buildings are twenty years old and, particularly those that are poorly managed, are more susceptible to maintenance problems than newer buildings (1). Concerning residential buildings, half of Hong Kong’s stock falls within this age group. Due to the high-rise, high-density development pattern in the city, it cannot afford any failure of its building stock because this would not only affect the residents of the offending buildings, but also the community as a whole. For example, dilapidated buildings pose safety hazards (presented by falling building fabrics and fire outbreaks) to their residents and passersby. Moreover, poorly-conditioned buildings can jeopardize community health because there is a close relationship between the built environment and human health (2, 3).

Ironically, the public was not fully aware of the importance of proper building upkeep until tragedies happened. The government launched a comprehensive public consultation on ways to properly manage and maintain buildings in early 2004 after the painful Severe Acute Respiratory Syndrome outbreak and frequent fatal incidents of falling building fabrics. Before that, no one was concerned with the conditions of the city’s building stock, revealing a lack of a building care culture in Hong Kong. As a matter of fact, financial constraints very often hindered investments in building improvement, particularly in the housing sector, in which low-income households are concentrated. To solve this problem in a long-term manner, the mandatory establishment of maintenance reserves for all multi-ownership buildings to finance building repair and maintenance should be considered. In this paper, this option is overviewed. What comes next is a discussion on the implementation issue, which is about the application of the concept of transferable development rights (TDR) to facilitate the financing for a maintenance reserve.

Establishment of Maintenance Reserves in Buildings

The problems of building dilapidation are becoming increasingly apparent as buildings age. These have been vividly illustrated by some 120 building-related accidents from 1990 to 2002, which resulted in at least 21 deaths and 135 injuries (4). On account of the inadequacy of existing law enforcement to lessen the problems, suggestions, such as mandatory building inspections and voluntary building classification, were made during the government-led public consultation in early 2004 (1). The objective of these schemes is to help reveal more information on building
quality or conditions to the market and ultimately solve the problems of building neglect by market forces (5,6).

The Need for Maintenance Reserves in Buildings

However, it is anticipated that the impacts of these schemes are concentrated in housing at the higher end of the quality spectrum. This is largely because the majority of poorly-conditioned housing was owned by lower income groups, which often lack the financial resources to carry out maintenance or refurbishment even if its members know that their buildings are under-maintained. In light of the financial difficulties faced by lower income homeowners, the government and quasi-government organizations, such as the Hong Kong Housing Society and the Urban Renewal Authority, have offered loans and subsidy schemes to provide financial incentives to these property owners (7). Yet, these schemes have only helped alleviate some, but not all, problems. Since the number of private buildings in Hong Kong is so huge, the public purse is not able to cover the huge cost of rehabilitation without sacrificing funds for other public expenditures. In the long run, therefore, building owners should shoulder the financial responsibility for the upkeep of their own properties. This sounds reasonable because such assets are the private property of individuals, and there is no reason why homeowners cannot do the same for their housing.

To approach this problem in a sustainable manner, the government can require each building to have its own maintenance reserve to finance the maintenance and repair works of the common parts of the building. The reasons for the establishment of a maintenance reserve for all buildings are twofold. First, as mentioned, unlimited financial support cannot be provided by the government to rehabilitate all privately owned buildings. Homeowners have to bear the costs of building maintenance on a user pays principle. In other words, building owners should take care of their buildings themselves. By common law, with ownership comes responsibility for building upkeep. Besides, responsibility for keeping buildings in good condition rests with building owners, as presumed by the Buildings Ordinance. In addition, it is the contractual obligation of building owners, who are also lessees of the land granted by the government, to maintain and repair the buildings erected on a plot of land under most land leases. Needless to say, building owners risk being sued through tort law if someone gets hurt or dies from the accidents caused by the disrepair of their buildings.

Second, the setup of maintenance reserves for buildings can ease the problems arising from fund raising for maintenance and rehabilitation works. Raising money among owners is a notoriously difficult task for multi-ownership buildings, particularly for those with over 100 individual units. By common sense, the needs for and costs of repair and maintenance increase when a building ages, so a sustainable reserve of money for planned and unplanned building maintenance works is more advisable than
raising money each time. Upon this premise, it should be a good practice for owners to contribute small sums of money regularly to a maintenance reserve so that a sufficient amount is available for future maintenance and refurbishment works.

This practice follows the traditional Chinese wisdom of repairing a house before it rains. Using the analogy between humans and building, the establishment of a maintenance reserve resembles the current arrangement of retirement protection in Hong Kong. Local workers are statutorily required to contribute parts of their monthly salaries to their retirement reserves. Upon their retirement, these accumulated pools of money will be released to their contributors in installments. By the same token, building owners can make contributions to reserves on a regular basis (for example, by allotting a certain proportion of the management fee payable each month to the maintenance reserve) so that pockets of capital will be available to their buildings in times of need.

In fact, the idea of a building maintenance reserve or emergency fund is not new in other parts of the world. Decrees are in place in other countries requiring building owners to set up and maintain building maintenance reserves (8). In Australia, for example, the statutes require building owners to establish sinking funds to finance the repairs and replacements of their buildings. A similar stipulation is found in the United States, where, other than the administrative fund for day-to-day management expenditures, a reserve fund for repairs and renovations of common parts is required for each building. Relatively speaking, the institutional arrangement in Singapore is all-inclusive. Upon the completion of a building, a developer has to establish a maintenance reserve for it. It is obligatory for subsequent buyers of the completed properties in a building to make monthly contributions to the maintenance reserve. Furthermore, for the sake of large-scale maintenance and improvement works, the management committee of every building has to establish a sinking fund.

**Difficulties in setting up maintenance reserves in buildings**

Despite the needs to set up a maintenance reserves for a building, implementation of this option has come with difficulties. For new developments, it is comparatively easier to require maintenance reserves. Through the incorporation of a clause into all newly granted land leases, developers are obliged to set up maintenance reserves for their developments that are constructed in association with these leases. After alienation of the lot, individual owners should make regular contributions to the reserves under the Deed of Mutual Covenant, which is a land covenant specifying the rights and obligations of owners over the common parts of a development (9).

It is another story for existing buildings. Without any legal vehicle, it is nearly impossible to convince all owners of an older building to commit money to a maintenance reserve. Even if such legislation is in place, the root problems remain.
While the establishment of building maintenance reserve is conducive to proper building upkeep, the financial difficulties of some building owners are expected. Lower income homeowners may still face difficulty in making intervallic monetary contributions. In addition, their properties are old and in poor condition, so they cannot easily get the money through mortgaging, which depend on real property as security for the payment of a debt. It is common in Hong Kong for the sum of a mortgage term and the age of the building that is intended to be put up as collateral to not exceed 45 years. This common policy limits the opportunities for building owners to finance improvements to their buildings by means of mortgage loans.

In this light, the financial difficulties of these homeowners may hinder their desires to set up maintenance reserves to ensure better living built environments. As mentioned, the responsibilities for building upkeep should be vested in building owners under the principle of user pays. The government should, therefore, not shoulder this burden - at least not in the long run. Accordingly, in order to head-start the widespread establishment of maintenance reserves for buildings, a solution that can help owners without any financial commitment from the government is needed.

Adoption of Transferable Development Rights for Building Care

To help the owners of existing buildings establish their own building maintenance reserves, there should be a means to collective money-raising. To this end, the concept of TDR is proposed and its application for fiscally backing building improvements is critically reviewed.

Principles and history of transferable development rights

The concept of TDR is closely interwoven with that of property ownership. Generally speaking, property ownership can be considered a bundle of individual rights, including the right to use and develop the empty space above one’s property. This right is commonly known as an air right, and it determines the residual development potential of a plot of land. In principle, the owner (or owners) of a land parcel can sell the residual development right to someone else without actually exchanging any land, and the buyer can realize the right in another site. Therefore, land development rights can be severed from physical pieces of land. This forms the backbone of the TDR mechanism. TDR was first exploited in England to separate use rights from the underlying real estate as per the English Town and Country Act of 1947, which was essentially a development right acquisition act (10). Yet, TDR has been more extensively used in North America. During the past thirty years or so, TDR has been applied to environmental planning, open space preservation, and historic landmark preservation (11,12).
Basically, there are four essential elements for a viable TDR scheme: a) sending land parcels; b) receiving land parcels; c) the definition and specifications of the severable development rights of the land parcels; and d) the process of transferring development rights (11). As a general rule, unrealized development rights are transferred from the sending area to the receiving areas for realization by means of property development (or extension) under an easement or a deed. Depending on the government policy, TDR can take place between adjacent parcels or between non-contiguous sites. After selling the development rights to their parcels, landowners may continue using the land their properties, as permitted in the easement or deed. Therefore, they can retain their physical properties in the sending land parcels after the transfer. The buyer of development rights is entitled to use the rights acquired for development in the received land parcels. In reality, the ways to transfer development rights can vary, but they operate on the same principle. As for the consideration of development rights transfers, they can come in many forms, such as monetary remuneration and obligations for buyers to retain and maintain the structures in the sending land parcels.

To demonstrate how a TDR scheme works, a fictional situation with three buildings in a region is described. In the first place, as shown in Panel (a) of FIG. 1, all the buildings in a region are constructed on land parcels of the same area and subject to the same statutory development restrictions (say plot ratio). Land Parcels A and C are developed up to their maximum development potential, while there is unused development potential in Parcel B. Now the owner of the building erected on Parcel B would like to add some luxury interior decorations to his building, so he needs to raise money for this purpose. He can put the unused development rights up for sale in the market, which is managed by the government or a TDR bank.

What comes next is the transfer of the unused development rights to Land Parcel A, the owner of which would like to vertically extend the building there. This can be achieved by purchasing the development rights in the form of TDR certificates directly from the owner of Parcel A or from the market. The reasons for using TDR certificates are twofold. First, they help standardize the medium of transfer. The terms and conditions are more or less the same in every certificate, so that such a consistency can enhance the popularity of the scheme. Second, the certificate itself can serve as a planning approval that allows a landowner to build beyond the statutory development restriction, as shown in Panel (b) of FIG. 1. In order to avoid overdevelopment, a maximum bound (say 20% of the original development limit) is levied on the receiving land parcel. Concurrently, the assignment of development rights goes along with a stricter statutory development restriction of the sending land parcel. So under the TDR scheme, once the development rights are severed from a plot of land and transferred for use in conjunction with another site, a restriction is placed on the future uses of the transferring site.
A precedent of TDR application in Hong Kong – Letter B

TDR is actually not new to Hong Kong, as there is a similar precedent to it locally. That would be the Letter B system, which was first adopted by the colonial government during the early 1960s for land exchange with the aim of turning agricultural land in the New Territories into government land for public purposes and building construction to cope with increasing housing demand (13). The government took the agricultural land from the original owners, who were mostly villagers and farmers, and compensated them with Letters B for future re-grants of building land in the agreed-upon ratio of five units of agricultural land to two units of building land. The land used for compensation was located in new towns such as Tsuen Wan and Tseung Kwan O. By their nature, the Letters B are tickets for redemption of the plots of land with the sizes specified. The Letters B could be assigned or transferred freely in the market without any payment of stamp duty. Also, these tickets could be used to tender government land (13). This transferability of the Letters B attracted property developers into purchasing these tickets from the villagers and farmers and using them to exchange land in new towns for development. The Letter B system finally ceased after the handover in 1997.

TDR for urban rehabilitation in Hong Kong

The implementation of the Letter B system in Hong Kong was effective, as evidenced by the high number of Letter B transactions in a free market under minimal government regulation (14). The system was generally welcomed by landowners and developers. This precedent illustrated that as long as incentives provided by a TDR
scheme were attractive enough, it could run efficiently. Therefore, this article proposes the application of TDR to the maintenance and repair of buildings, in particular old buildings in urban areas whose development potential has often not yet been fully utilized.

The underlying idea of applying TDR to building care is to raise money using the unused development rights without affecting the ownership and occupation rights of the existing constructed properties. In every sale of development rights, the proceeds will be deposited into the maintenance reserve for the built development in the conveying site. Unless the development concerned is demolished or redeveloped, no individual owners can share the money in the reserve. In this way, the owners of old dilapidated buildings can sell their unused development potential in exchange for the money to establish building maintenance reserves and finance repair and maintenance works, while abuse of the mechanism is less likely. Interested parties, such as developers, investors, and land trusts, can purchase the TDR certificate for their own uses.

In fact, under the proposed TDR scheme, building maintenance reserves can be financed by the redevelopment potential of the associated land parcels. In other words, the reserves are stemmed from landowners’ own equity. Once the development rights of an old dilapidated building are sold, a TDR certificate with a face value equal to the value of the development rights in the associated land parcel sacrificed is created.

For a successful TDR scheme, there must be a TDR market and perceived value for the TDR certificate so as to motivate the transfer and use of the scheme (15). In the scheme, development rights are severed from the bundle of property rights of a land parcel and transferred through a market, which serves as a medium of exchange. It is hence essential to have a market that functions efficiently and equitably. In this light, the government can act as the clearer of the development rights transferred. Alternatively, a TDR bank can be set up to serve as a buyer of last resort to strengthen scheme credibility, as well as a facilitator. The existence of a bank creates creditability because, if developers and landowners see that a bank is actually purchasing and selling the TDR, they would be confident that the TDR has value and there is really a TDR market (16).

In theory, the proposed TDR scheme is a voluntary one, so property owners decide whether or not to sell the unused development rights to their land parcels. Nonetheless, flexibility can be allowed to deal with those property owners who do not maintain their buildings voluntarily. Through legislation, the court can be empowered to order uncooperative owners to sell their development rights, and the proceeds from the sale can be used to upgrade the buildings and establish maintenance reserves. Under this system, more options will be available for the government to deal with dilapidated buildings.
Benefits and Limitations of the Proposed TDR Scheme

The benefits of the proposed TDR scheme are not quantifiable, but definitely substantial. By the first principle (i.e., transferring development rights from the sending site to the receiving site in return for remunerations), the scheme can leverage market monies to achieve the goals of building care without direct cash outlays from the government. This practice satisfies the user pays principle because the payers for the building improvement works are ultimately those building owners who sell their unused development rights and the buyers of these rights. Through the sale of residual development rights, maintenance reserves can be established in those buildings whose owners have financial difficulties.

In addition, the TDR scheme offers a new investment vehicle to the market. With an effective TDR scheme in place, development rights turn into the currency of development. The TDR certificates can be assigned freely at any time, not just when a particular development in a receiving land parcel is pending. Furthermore, the TDR certificates can be traded as a listed trust so that they serve as a general investment available to anyone, not just developers.

However, there still exist some foreseeable difficulties in the implementation of the proposed TDR scheme. First of all, the success of the scheme is contingent on the strength of public acceptance (11). The general public, real estate professionals, and lawyers all need to be educated on the TDR process (17). Public education is essential for everyone to understand the goals and operations of the TDR scheme. Given that a successful scheme requires community buy-in, it takes time and resources for the government to market the scheme, say through advertisements and meetings with building owners. This public acceptance of the scheme can be fortified effortlessly if the scheme is not so complex that it can be understood easily. Yet, complications may arise from the valuation of TDR certificates because land values differ according to location. Therefore, whether the value of floor area of 5,000 square feet in region A has the same value as a floor area of similar size in region B is often questionable.

Another constraint facing the proposed scheme is politics. The TDR scheme unavoidably increases development density in the receiving regions. Residents or other stakeholders in these regions may be aggrieved by too high a development density, so they may raise objections. In order to lessen the tension among different parties, comprehensive public consultations must be conducted to gather the views of the public on the maximum enhancement in development potential allowed. Also, the government should carry out studies on the effects of the TDR scheme on the existing infrastructure and public utilities. Ideally, the receiving areas should be newly developing regions.

From the above, it is anticipated that the initiation and administration of a TDR market can be costly (18). Overseas experiences also suggest that the government
needs to take a leading role in establishing and promoting the market for development rights. Besides, it has to oversee the market, track and enforcement the provisions in the TDR certificates or deeds, and assist in the proper preparation of these documents (19).

**Conclusion**

The periodic maintenance and repair of buildings to defer dilapidation is not so different from the regular exercises done by some people to maintain their health. What is different between two is that building upkeep usually requires a large sum of money, while exercising can be free. On this issue, this paper goes one step further by suggesting that financial reserves are essential to the well-being of humans as well as buildings. Building maintenance reserves should provide a sustainable source of funds for repair and maintenance, and therefore, are conducive to a safe and healthy built environment in Hong Kong. Yet, difficulties may be encountered by the owners of existing buildings in establishing their own maintenance reserves, so the concept of TDR is proposed. Overall, a TDR scheme can serve as an equitable tool to make building improvements more financially feasible. This is because the scheme resorts to the property market to pay for improvement works without any financial injection from the government. From the viewpoints of developers and investors, the TDR scheme offers more opportunities for investment. Nonetheless, the implementation of TDR is not without any difficulties. The success of the scheme depends on its recognition by the public, and it is highly likely to be opposed by residents in receiving regions. Therefore, although the Letter B system can be a good reference for setting up a TDR scheme for building care, it is still worthwhile for policymakers to further study the feasibility of using TDR to solve the problems of building dilapidation.

**References**


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