

HKIS Guidance Notes on Valuation of Development Land



THE HONG KONG INSTITUTE OF
SURVEYORS

香港測量師學會



HKIS

Guidance Notes

**on Valuation of
Development Land**



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1.0 Introduction

- 1.1 Property valuation plays a pivotal role in the real estate market in Hong Kong, impacting on both new property development and urban renewal. The valuation of development land is of particular importance, since this directly impacts on land acquisition, site assembly, plus land grants, and thus the supply of new accommodation, particularly new housing. Development land valuations may also be required for land disposals, for granting mortgages or other financing, or for liaison with government upon land premiums for private treaty grants, lease modifications or land exchanges.
- 1.2 These Guidance Notes are intended to provide ‘recommended good practice’, i.e. recommendations that in the opinion of HKIS meet a high standard of professional conduct.
- 1.3 Although these Guidance Notes are advisory in nature, members should note the following:-
 - (a) When an allegation of professional negligence is made against a member, a court may consider the contents of any relevant guidance notes published by HKIS in deciding whether or not the member acted with reasonable competence.
 - (b) Each member can decide on the appropriate method in any professional task. However, where members do not follow the recommendations in these Guidance Notes, they should do so only if deviation is supported by solid justifications. In the event of legal proceedings, a court may require explanations as to why they decided not to adopt the recommendations.
 - (c) If members have not followed these Guidance Notes, and their actions are reviewed in an HKIS disciplinary case, they are likely to be asked to explain their actions, and this may be considered by the General Council of HKIS.
 - (d) Members should note that they have the responsibility of deciding when it is appropriate to deviate from these Guidance Notes.
- 1.4 These Guidance Notes are intended to assist valuation practitioners to carry out valuation of development land in Hong Kong, and are specific to local legislation and government's practice notes, although many of the principles may be applied elsewhere. Accordingly, reference has been made to local legislation, particularly new Ordinances relating to first hand sales of residential premises, and new Stamp Duty levies. The decisions of the Lands Tribunal have been insightful, as are the valuation practices adopted by the Lands Department in assessing development land values. Developers have also helpfully contributed on a range of practical issues involved in the development process that materially impact valuations. These include works timetables, multiple government departmental liaison, and particularly marketing costs which have escalated markedly in recent years.

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- 1.5 The most widely adopted methods of valuation comprise Market Comparison Method and Residual Method. Discounted Cashflow Analysis is also used in the market, although this is not as prevalent as the two primary methods for land valuation, and is therefore only briefly reviewed here.
 - 1.6 For any valuation of development land, practitioners need to discuss with their client the parameters of the assessment, its use, and any assumptions that may be required. Development schemes with draft or approved building plans have been considered here, but each case has different circumstances that will require investigation before commencing a development land valuation.
 - 1.7 These Guidance Notes should be read in conjunction with The HKIS Valuation Standards, as well as International Valuation Standards.
 - 1.8 Percentages or figures mentioned in this document are not definitive, and may vary under different circumstances. Practitioners need to be aware of changes in market conditions, and updates in government policies, government's practice notes, plus decisions of the courts, particularly the Lands Tribunal. Valuers are also advised to seek opinions from other professionals, such as architects, building surveyors and quantity surveyors for their specialized expertise for complicated projects.
 - 1.9 Examples in the Appendices serve the purpose of illustration only. Each parcel of development land should be considered for its own characteristics. Valuers need to consider and be able to justify all pertinent issues and assumptions for each development site being valued.
 - 1.10 We trust that practitioners find these Guidance Notes to be of use to them when enquiry is made for a valuation of development land, when issues are to be agreed with, or made available, by the instructing party. These Notes may also be relevant to the recipients of such valuations, including developers, financial institutions, and others in the development and valuation fields.

2.0 Market Comparison Method of Valuation

2.1 Site Comparables

- 2.1.1 Making reference to land sales and hence adopting the Market Comparison Method is considered the best method of valuation for development land, if relevant comparable site sales are available. If the sites are directly comparable, they may form the principal method of assessment. With the resumption of regular Government land sales in recent years, more site transactions are available, and these should be utilized where appropriate.
- 2.1.2 Valuers should make all reasonable efforts to collect, analyze, and interpret relevant market site transactions that are available, and where appropriate make adjustments for the differences of the comparables with the subject property. The analysis of site transactions by means of Accommodation Value ('AV') has been widely used in Hong Kong. AV is defined as the land value divided by the gross floor area which is allowed to be built on the land. This may be on a cleared site basis ('CSV') or reflective of a site requiring clearance.
- 2.1.3 Transactions of land with existing buildings erected will require further analysis. They may reflect existing use value, redevelopment value, or value after a change in use. If the en-block sale comparable appears to reflect redevelopment value of the land, then issues including the time and costs of obtaining vacant possession and site clearance need to be assessed and included in the comparable analysis.
- 2.1.4 Valuers should not omit the Market Comparison Method of valuation unless there are simply no comparables available. However, even with AV analysis of land sales, it is usually beneficial to also undertake an alternative second valuation approach in order to reinforce an assessment.
- 2.1.5 Finally, different site comparables may vary for issues related to their acquisition and transaction costs, possibly including stamp duty, so valuers should investigate such issues, and make adjustments as appropriate.

2.2 Adjustment Factors

- 2.2.1 Comparable sales evidence is normally taken at the date of Agreement for Sale and Purchase ('ASP'), or any earlier binding Provisional Agreement for Sale and Purchase ('PASP'). If the transaction has not been completed in accordance with the ASP by the date of assignment, then investigations upon the relevant circumstances and any subsequent re-sale of the property will be required before its possible use as market evidence.
- 2.2.2 Valuers will need to give due consideration to the market conditions over the relevant time for adjustment, particularly in volatile market conditions. It would be more relevant to select the market evidence close to the date of valuation. Normally greatest weight should be placed on the most recent transactions, and those requiring least adjustments.
- 2.2.3 For post valuation date comparable transactions, apart from High Court¹, the Lands Tribunal² in Hong Kong has also confirmed their use in a number of cases. When there has been an unforeseeable major change in market sentiment that occurred after the valuation date, then post valuation date evidence may be less reliable.
- 2.2.4 Valuers should make adjustments for different characteristics of the comparables, as appropriate. Factors of adjustments could include location, site condition, size, view, zoning, accessibility, class of site and development scale.
- 2.2.5 Special development restrictions imposed in land grants, including any maximum or minimum number of residential units, or 'Hong Kong Property for Hong Kong People' policy restricting end users may need to be taken into consideration.
- 2.2.6 Similarly, positive obligations placed upon the grantee under special conditions on issues such as slope stabilization and maintenance, the provision of transport or GIC facilities may impact on the overall development cost and future operating outlays associated with the completed development. Valuers should make appropriate allowances for any such covenants.
- 2.2.7 Government rent could be another relevant issue of material variance, with old lots on very long leases paying far lower annual outlay than modern or regranted land parcels. Capitalization of the rental to a net present value will give clear comparison of the variance in outlays involved.

¹ High Court Case: Zhuang PP Holdings Ltd v Lam How Mun Peter and others, HCA 1589/2003

² Lands Tribunal cases:

(i) Good Faith Properties Limited and Others v Cibeon Development Company Limited, LDCS 42000/2011

(ii) Cheer Capital Limited v Unibase Investment Limited and Others, LDCS 5000 & 6000/2013

(iii) Eltron Development Limited v Director of Lands, LDLR 4 of 2013

3.0 Residual Method of Valuation

3.1 Reasonable Hypothetical Scheme

Gross Development Value

- 3.1.1 The formulation of a reasonable hypothetical development scheme which produces the optimum value of the property being assessed is essential for all residual valuations. Multiple schemes may need to be analyzed before ascertaining which scheme provides the highest land value.
- 3.1.2 For the optimum scheme, the scheme assessment should set out all relevant valuation components, including gross floor areas, common parts and saleable areas for the assumed uses, plus ancillary income generating areas such as car parks, and flat roofs, to derive gross development value ('GDV').

Development Controls

- 3.1.3 The hypothetical development needs to be analyzed with reference to all relevant development controls, i.e.:
- (a) The land grant conditions (including any subsequent lease modifications, deed of variations and no-objection/waiver letters);
 - (b) The outline zoning plan (including planning approvals, if any);
 - (c) The Building (Planning) Regulations of the Building Ordinance, Cap 123; and;
 - (d) All relevant Guidelines and Practice Notes issued by Buildings Department, Lands Department and Planning Department.

Development Design

- 3.1.4 In formulating the hypothetical development, making reference to the composition of developments near the property being valued may assist in terms of the form of development and user mix. However, the latest development trends could result in variations to nearby completed developments. Where a valuer proposes a development form or mix of users that significantly deviates from the surrounding developments, the valuer should be satisfied that there will be sufficient demand for such proposed accommodation and development within the subject locality.

Approved General Building Plans

- 3.1.5 Valuers may refer to any General Building Plans ('GBP') for the property being valued. However, unless already approved, these plans should be considered by reference to all development controls above. Even where approved, and meeting all controls, confirmation that demand exists for the scheme and that it represents the optimum scheme for the land parcel are still pre-requisites before plan adoption in a residual valuation.

3.1 Reasonable Hypothetical Scheme *(cont'd)*

Draft General Building Plans

3.1.6 Valuers may also make reference to any draft GBP scheme, which has not yet received approval. However, extra attention will be required as to the key assumptions adopted by the Authorized Person in preparing the GBP to ensure that the proposed development scheme is wholly appropriate to be taken as hypothetical development for valuation use. Consideration may be required for the following issues:

- Flat scale and mix proposed for residential developments;
- Provision of ancillary facilities (e.g. club house, car parking; retail areas etc.);
- Provision of green features for residential development, and any assumed concessions included;
- Gross Floor Area ('GFA') exemptions/concessions with reference to practice notes from the Building Department, Planning Department and Lands Department, plus:
- Assumptions on site classification, site area, any existing right-of-way, provision of widening of service lane(s), and possible partial dedication for public passage, amongst others.

Special Building Designs

3.1.7 A proposed development may involve special accommodation involving technical challenges and resultant high costs, such as construction of multiple basement levels, site formation involving significant slope work, or designs with long span structures including transfer plates. Valuers need to take reasonable steps to ascertain the viability of proceeding with such high construction cost implication works, and ensure the proposed development is still optimal having regard to the overall costs and benefits.

3.1.8 Liaising with the project Authorized Person or Quantity Surveyor for cost analysis in such special circumstances may assist, with the relevant details set out in the valuation report upon data sources adopted.

3.1.9 When a valuer employs, or makes significant reference to a development scheme that is based upon a set of GBP pending approval, it is prudent to state in the valuation report appropriate caveats, so that the readers of the valuation report will be informed of the status and adoption of the development scheme, and its importance to the valuation.

Purpose of Valuation

3.1.10 For valuation reports prepared for financing or for sales and purchase, for which the relevant approved development scheme may form a major consideration for the stakeholders, it would be of particular benefit for the valuation to be based on an approved GBP.

- These benefits include
- Known to meet all Government regulations;
 - Development lead time reduced, and;
 - Overall less uncertainty and fewer assumptions required.

3.0 Residual Method of Valuation

3.2 Assessment of Gross Development Value

3.2.1 Gross Development Value ('GDV') is the assessment of total proceeds of sale arising from the sale of all elements of the completed development proposed to be built on the site being valued. Valuers will need to obtain market evidence to justify and support the various values adopted for income generating elements of a development that make up GDV.

3.2.2 There are three major valuation issues in assessment of GDV:

- The most appropriate method of valuation;
- The choice of comparables, plus:
- Adjustment factors, analysis, and weighting of evidence.

Methods of Valuation

3.2.3 The Market Comparison Method is the principal method of valuation providing relevant market transactions are available. Where unavailable, an alternative valuation approach such as income capitalization or a discounted cash flow analysis may be appropriate.

3.2.4 The income capitalization method would be appropriate provided that both detailed rental data and yield evidence are available. Given the sensitivity of income capitalization, it is necessary for valuers to justify rental rates and yield capitalization rates adopted.

Analysis of Comparables

3.2.5 The Hong Kong property market has a practice of pre sales, i.e. sales of units prior to the actual completion of the proposed development. Pre sales transactions may have various kinds of payment terms, including lump sum payment, equitable mortgage and staged payments. Sales evidence should also be distinguished between (1) first hand sales of units in developments by developers and (2) second hand sales of units by individual owners who have acquired units from developers.

3.2.6 Valuers should carry out analysis of sales evidence with regard to its characteristics, the timing for completions, and the resultant net present value of the deferred price.

3.2 Assessment of Gross Development Value *(cont'd)*

First Hand Sales Market

3.2.7 There are often differences between prices quoted in developers' sales price lists, and the actual recorded transaction prices of the units. Different discounts/rebates may be provided to buyers, as set out in the price list, or offered by the developers or their agents, including:

- Mortgages being offered by the developers or a designated mortgagee;
- Stamp Duty offers which may include stamp duty cash rebates, or transitional loans of the stamp duty payment;
- The waiving of liability to pay solicitors' fees, and possibly also stamp duty.

The financial implications of each need analysis.

Second Hand Sales Market

3.2.8 Valuers analyzing secondary market sales evidence will need to make appropriate adjustments to reflect the differences between the comparable transactions with the accommodation in the proposed development. There could be special circumstances for some transactions, like sales between related parties, buyers with a special interest, acquisitions for redevelopment, or purchase by adjoining unit owners.

Adjustment Factors

3.2.9 Properties are unique. Valuers need to consider and apply adjustment factors to reflect the differences between comparable transactions in the Market Comparison Method, so as to arrive at a rational valuation conclusion. Shown at Appendix 1 is a schedule of headings for potential adjustment factors for various classes of properties.

3.2.10 To derive an opinion of the necessary scale of adjustment for the market change between the date of comparable sale and the Date of Valuation, reference may be made to published property indices, or carry out analysis of the specific market sector being valued. Property Indices published by the Rating and Valuation Department ('RVD'), and Centa-City Leading Index ('CCL Index') from Centaline Property Agency Ltd. are widely adopted. These indices are only applicable to adjustments for completed units, and represent relevant baskets of properties which may be different to the property being valued. Furthermore, the RVD has adopted a practice of issuing provisional figures until more information has become available.

Evidence Overview and Weighting

3.2.11 After assembly and analysis of sufficient transactions, the adoption of a weighting system is sound practice, placing most weight on directly comparable evidence requiring minimal adjustment, and ignoring out of line data.

3.0 Residual Method of Valuation

3.3 Development Period

- 3.3.1 The development period ('DP') is of particular importance in a residual valuation, since it materially affects the scale of financing charges, and the time that developer's capital is employed, which in turn impacts on the scale of developer's profit.
- 3.3.2 The DP normally refers to the time from site possession to the issuance of an occupation permit ('OP') under the Buildings Ordinance, or certificate of compliance ('C of C')/consent to assign under a land grant, whichever is applicable for the completed development.

Pre-Construction Works

- 3.3.3 For valuers assessing DP, consideration should be given to the following pre-construction issues and approvals which may be needed before actual construction works can commence, and the time frame for each. In general, pre-construction issues may take 6 months or more, although many applications can be processed by government departments concurrently. Time may be incurred for:
- (a) any occupiers on-site moving out, and achieving vacant possession;
 - (b) demolition of buildings standing on site, and the complexity of demolition, hoarding and safety issues;
 - (c) site investigation and preparation of necessary submissions or assessment reports to comply with land grant conditions or ordinances/regulations;
 - (d) approval from Buildings Department for General Building Plans (including possible re-submission);
 - (e) approval for design, disposition and height clause under Government Lease;
 - (f) obtaining consent under any planning approval or land grant conditions, such as:
 - Tree Removal clause;
 - Landscape Master Plan;
 - Drainage Impact Assessment;
 - Sewage Impact Assessment;
 - Noise Impact Assessment;
 - Traffic Impact Assessment;
 - Any additional requirements or fulfillment of Government lease and/or Ordinances, such as Ecological Impact Assessment, Archaeological Investigation and Mitigation Proposal, S.16 Application/Master Layout Plan etc.

3.3 Development Period (cont'd)

Large Complex Developments

- 3.3.4 Extensions of the development period may arise from the complexity of architectural/building design, multiple basement levels, scale of the development, size of the site, or availability or restrictions on site access. External factors may also impact the timetable, including topography, the surrounding environment, soil/sub-strata conditions and/or the condition of neighbouring buildings.

Specialist Advice

- 3.3.5 Overall, it is recommended valuers consult the developers, their construction manager/project manager or architectural team of the subject site for any specialist advice required on the development period, particularly for large complex developments.

Precedent Projects

- 3.3.6 If no specialist advice is available, making reference to the time required for other similar developments will give a market evidence based timetable. Information is available from the Buildings Department relating to the timing of development approvals and the issuance of occupation permit of projects. This may give useful indication of timeframes for a variety of developments.

Development Period Examples

- 3.3.7 Shown at Appendix 2 are three examples of development timetables for projects of varying complexity.

- Example 1 - A straightforward 22-storey residential tower over 3-level podium, involving demolition works. OP in 36 months + 4 months fit out = 40 months overall development period.
- Example 2 - Clear site development of 3 residential blocks with DDH clause in land grant. OP in 55 months; C of C granted at 63 months.
- Example 3 - Major complex of 12 blocks, in 2 phases.
Multiple pre-construction consents processed.
Phase 1 completion c. 66 months; Phase 2 after 78 months.

Valuer's Explanatory Notes

- 3.3.8 Explanations on the assessment of DP should be set out in the notes that accompany an assessment, to clarify all sources of data, and justifications for the development period adopted.

3.0 Residual Method of Valuation

3.4 Construction Costs

QS Assessment

- 3.4.1 Construction costs in any residual valuation of development land should make reference to assessments made by qualified professionals, where available. If a detailed and up to date quantity surveyors ('QS') assessment is available, or the construction contract has just been put out to tender, these figures may be most reliable.
- 3.4.2 However, care should be taken when using data supplied. Sources of such data should be investigated before their adoption, since adjustments may sometimes be required, for such factors as:
- Conversion ratio between Gross Floor Area and Construction Floor Area;
 - Scale of the proposed development;
 - Building height;
 - Restrictions on site access.
 - Special site conditions, e.g. significant excavation and lateral support, settlement, caverns, etc.

Use of Cost Data Publications

- 3.4.3 Where no such QS assessment or tender figures are available, reference could be made to building cost data prepared by quantity surveying firms.
- 3.4.4 The HKIS has published a Building Cost Pro Forma For Private Sector Developments In Hong Kong (2013 Edition) so as to facilitate the estimation of construction cost by using published quantity surveyors cost information.

Possible Ancillaries

- 3.4.5 The pro-forma has not included the following two items:
- (a) 'Preliminaries': Normally included under this head are outlays for site management and supervision, site offices, transportation, cleaning, communications, surveying and technical staff costs, plus health and safety. As these costs are tied with the development process, they should already be included in an all up construction cost. Nevertheless, care should be taken to consider the components involved, and whether the total construction cost covers all required works for a particular site, or whether any special additions need to be included for a specific residual valuation. Surveyors should determine the applicability of 'Preliminaries' after considering all factors in each scenario.
 - (b) 'Contingencies' is sometimes incorporated into a construction budget to cover the cost of unforeseen factors related to construction. As this factor reflects the estimation of risk involved in the construction work, it should not normally be added to a well assessed construction cost unless special circumstances make its inclusion justified.

3.5 Marketing Costs

3.5.1 Marketing costs are development outlays to be deducted from the gross receipts of the sales of the completed development in a residual valuation assessment. They usually comprise agency fees, legal costs, advertising and promotional outlays. They may also extend to design and construction of show houses or flats, open days, and related sales campaign advertising, etc. These may vary in scale for different types of developments, and may change over time with changing market sentiment.

Agency Fees

3.5.2 Agency fees paid to the estate agents in the sales of the completed development may be significant. These comprise the commission paid to the estate agent directly related to each transaction, being usually a percentage of the transaction price, or the commission paid to the estate agency companies for services upon the whole sales project. The commission could be based on a percentage of the total transaction price, or at a lump sum for pre-fixed contract duration and range of services.

3.5.3 The assembly of agency fee rates for the scale and type of the properties involved would be beneficial before being adopted in a residual valuation, since fees vary significantly for different types of properties and the scale of sales involved. Bonus or other incentive fees are increasingly common.

Fee Rebates

3.5.4 Agency companies on occasion, provide rebates out of part of the agency fees so as to attract buyers of new residential premises. The agency fees payable by developers to estate agents as a percentage of sale prices have been escalating, with recent evidence showing a range of 2.5% to 4% for residential projects, part of which could be rebated to buyers.

Other Costs

3.5.5 Legal costs will be incurred for application for pre-sale of the units, the preparation of a deed of mutual covenant, and the preparation of sale and purchase agreements.

3.5.6 Other outlays for advertising and promotion costs for a marketing campaign appropriate for the scale and type of the properties involved are now increasing, after the Residential Properties (First-hand Sales) Ordinance, which took effect in April 2013. Examples of these outlays include:

- Architectural and professional services for the preparation of extremely detailed sales brochures;
- Design and construction of show flats;
- Rental, security and management staff cost for the sales office and possible off site show flat, plus;
- Media advertising costs, including creation and management of a website, newspapers advertisements, outdoor advertising and social media etc.

3.0 Residual Method of Valuation

3.5 Marketing Costs (*cont'd*)

Cost Range

3.5.7 Market intelligence indicated that in early 2015, marketing costs excluding the 2.5% to 4% for agency fees for first hand residential projects ranged between a further 3% and 5% of the sales proceeds. For smaller scale developments, the marketing cost percentage may be even higher. Therefore total marketing costs are significant; in aggregate anywhere from 5.5% to 9% of sales proceeds, depending on the project, and the marketing required. The residual examples at Appendix 3 adopt 6% for marketing and related legal costs, as does the DCF example at Appendix 4. However, these will change over time, and valuers are advised to check prevailing market rates.

3.6 Developer's Profit

3.6.1 A usual approach for assessing developer's profit is a certain percentage of the cost outlays, covering:

- Construction Costs;
- Professional Fees;
- Finance cost; and
- Land Cost.

The developer's profit can also be expressed as a percentage of the gross development value. If discounted cash flow valuation is used, the expected rate of return represents the developer's profit element.

3.6.2 Some developers in Hong Kong treat the finance costs as part of the developer's profit in their residual valuation methodology. The rationale being that the development produces return for the capital employed.

3.6 Developer's Profit (*cont'd*)

3.6.3 However, many modern development projects are becoming increasingly complex, where the development period may be extended, possibly significantly, for issues that may include:

- Section 16 planning application;
- Traffic Impact Assessment;
- Drainage Impact Assessment;
- Sewage Impact Assessment;
- Noise Impact Assessment;
- Environmental Impact Assessments;
- Landscape Consultancy; and:
- BEAM 'Green Features' Planning /Submission.

In such cases, developers will have land acquisition funding tied up for notably longer periods than the pure construction timetable.

3.6.4 Developer's profit needs to reflect:

- The nature of the development and related risks. These include marketing risks for sales and lettings, risks of construction difficulties and cost overruns, and delays in obtaining relevant development approvals.
- Competition and market demand for the type of development scheme, plus:
- The development duration, since lengthening the development period will escalate the necessary return on outlays and capital.

3.6.5 Straightforward developments catering to strong market demand will serve to reduce risk, and thus profit rate expectation.

3.6.6 Larger scale and longer duration complex developments involve higher risk, as outlined in 3.3.1 above, so it may be appropriate to adopt a higher rate of return in such development land valuations. Similarly, developments requiring multiple approvals from different authorities will also incur longer development periods and incur higher risks.

3.6.7 Developer's profit rates of 15% to 20% have been adopted in recent decisions of the Lands Tribunal. However, before applying such scale of profit, valuers need to consider the market situation and property being valued in determining an appropriate profit rate. Site conditions and the stage of construction of any works on site are factors which may need to be considered.

3.0 Residual Method of Valuation

3.7 Finance Charges

Bank Financing

- 3.7.1 Historically, financing charges were assumed a wholly local and straightforward issue, linked to Hong Kong Prime Rate ('HKPR'). With the greater internationalization and competitiveness of Hong Kong's banking sector in recent years, a reduction of assumed finance charges down to or below HKPR has evolved.
- 3.7.2 Given the wide diversity of developers, their histories, track records and net asset values, financial institutions are increasingly offering different finance charge rates to different parties, reflecting risk and business relationships. Small scale developments which are likely to be undertaken by smaller, and less well capitalized developers, will attract finance charges higher than major developers with successful track records for similar project completions.
- 3.7.3 Such financing may now be charged with reference to
- the Prime Rates for relevant banks;
 - the Hong Kong Interbank Offered Rate ('HIBOR');
 - London Interbank Offered Rate ('LIBOR').

Other Funding

- 3.7.4 Other forms of funding besides bank mortgages are becoming increasingly common:
- Syndicated loans of varying types have been adopted by major developers; some at fixed and others at floating rates. Small and medium developers may find this type of finance not suitable and sometimes have difficulty to secure syndicated loans.
 - Bonds issued by large developers or corporations allow for potentially more flexible, longer financing than banks historically provide.

3.7 Finance Charges *(cont'd)*

Cost Variables

- 3.7.5 The length and complexity of a development project will also impact on finance charges, since longer projects, particularly requiring multiple government approval processes, may significantly lengthen the development period and its risk. As a greater risk-return rate may be required, this would increase cost of funds.
- 3.7.6 Overall, finance charges should be carefully assessed having regard to:
- The scale of the development, and hence scale of developers likely and able to undertake it;
 - The extent and certainty of works timeframe;
 - The risk and market environment at the time financing is arranged; and
 - Loan to value ratio, with lower rates for lower ratios.
- 3.7.7 Rates in the market vary substantially at any given valuation date, and adoption of market oriented achievable finance rates based at or below HKPR, or for major projects HIBOR or LIBOR oriented funding, will ensure notably more precision in the resultant residual valuation. In the residual valuation examples at Appendix 3, a rate of 4% has been used, being below prevailing HKPR.

3.0 Residual Method of Valuation

3.8 Professional Fees

3.8.1 Historically, a broadly adopted assumption was made that all professional fees required to complete a development, covering:

- (a) Architect's fees;
- (b) Structural engineers fees; and
- (c) Quantity Surveyors fees

could be taken at six percent (6%) of the construction cost. When a separate project manager was employed, additional fees would be incurred.

3.8.2 More recent projects have become increasingly complicated, and may require additional specialist professional input, particularly at the pre-construction stage. These additional consultants may include:

- (e) Planning consultants for Section 16 application/approval;
- (f) Traffic consultants;
- (g) Estate surveying consultants for processing land grant approval;
- (h) Civil engineering consultants;
- (i) Geotechnical engineer;
- (j) Building services engineer;
- (k) Interior designers;
- (l) Landscape consultants;
- (m) BEAM professionals (where green concessions are sought);
- (n) Environmental consultants.

3.8.3 For larger, more complex or high quality projects, an even larger team of consultants may be required for:

- (o) Façade engineering consultants;
- (p) Elevation designers;
- (q) Lighting consultants;
- (r) Signage consultants, and;
- (s) Acoustic consultants.

3.8 Professional Fees (cont'd)

- 3.8.4 Therefore, professional fees for use in residual valuations should be assessed by reference to:
- The scale and complexity of the development;
 - The potential need for pre-construction approvals;
 - Any special conditions within the land grant;
 - The type and quality of development appropriate for the site, and :
 - The finishes, common areas, landscaping and hence possible multiple supporting consultants required to execute a quality modern development.
- 3.8.5 Higher professional fees may be applied for those complex development projects. Valuers may refer to their clients, or cost consultants, for guidance, particularly where consultants' contracts are in place.

3.9 Stamp Duties

- 3.9.1 There are various types of stamp duties for sale and purchase of real property in Hong Kong including Ad Valorem Stamp Duty, Special Stamp Duty, Double Stamp Duty and Buyer's Stamp Duty. The normal market practice is for the buyer to be responsible for the Ad Valorem Stamp Duty and it should be noted that the tax liability will be borne by parties involved in the transaction.
- 3.9.2 Developers would take into account these stamp duty liabilities in the assessment for purchase price for development land. It is worth noting that there are refund provisions in the Stamp Duty Ordinance for Double Stamp Duty and Buyer's Stamp Duty, where applicable, for properties acquired for development purpose.
- 3.9.3 It is noted that some market practitioners do not allow stamp duty explicitly in their residual valuations. Where practitioners prefer not to allow the stamp duty explicitly, then a higher developer's profit should be required in the residual valuation model to reflect relevant stamp duty liability.
- 3.9.4 Under the Stamp Duty Ordinance, land transactions involving the Hong Kong SAR Government are not chargeable with stamp duty. Thus government land sales, be they auctions or tenders, land exchanges, or lease modifications, are not liable to stamp duty payment. Valuers should be aware of such different stamp duty treatment in government related land transactions and private market land transactions when carrying out comparable analyses.

4.0 Discounted Cash Flow

4.1 Discounted Cash Flow

- 4.1.1 As an alternative to the Residual Method of Valuation, valuers may conduct the land valuation by using the discounted cash flow (DCF) model.
- 4.1.2 DCF models adopted in the market vary significantly in terms of valuation and financial assumptions, and thus the valuation results may vary substantially. They are very sensitive to changes in adopted interest rates. DCF Analysis is more commonly used for valuation of investment properties, and is not as prevalent as the Market Comparison Method and Residual Method for land valuation.
- 4.1.3 For valuation of development land, the DCF model should follow the basic valuation principle of a residual valuation, by assessing the potential sales proceeds of the proposed development and deducting all necessary development costs plus the required profit to arrive at site value.
- 4.1.4 A DCF model could be calculated on monthly, quarterly or yearly basis, subject to the nature and program of the subject development. Sales proceeds and development costs should be reflected in the DCF model according to their respective cash flow patterns throughout the development period, and the net cash flow so obtained needs to be discounted at a discount rate to provide net present value. Adjusting the net present value for the required profit, will derive the land value of the subject development.
- 4.1.5 Detailed format and key assumptions of DCF model could vary significantly in respect of differences in various factors, such as nature of developments, purpose of valuation and client's requirement agreed with the valuer with instructions. An example of land valuation by DCF is provided in Appendix 4, which basically follows the parameters adopted in the examples of residual valuation in Appendix 3 for cross reference.

4.2 Development Cost Plan

- 4.2.1 In determining the cash flow for development costs, reference can be made to any development cost plan provided by the professional Quantity Surveyor. However, valuers should take due care towards the reasonableness of any development cost plan provided and its consistence with other assumptions adopted in the valuation, such as building quality and development period.

4.3 Discount Rate

- 4.3.1 In DCF model, the net cash flows will be discounted at a discount rate to obtain the net present value of the subject development site. There are various techniques in deciding on discount rate such as cost of finance, return on investment or risk return, at least equal to the cost of capital.
- 4.3.2 DCF calculations are sensitive to the discount rates adopted. The different net present values derived may represent different elements of value to an owner or any potential purchasers of a development site. If the adopted discount rate represents the required internal rate of return, the resultant net present value should reflect the market value of the subject development site. If another rate is applied, necessary adjustment of the net present value would be required to obtain the market value. For instance, the DCF example in Appendix 4 adopts a discount rate based on the cost of finance, which does not reflect the development profits required in the market. Therefore, the resultant net present value needs adjustment for the development profit to arrive at the market value of the land site.

5.0 Conclusion

- 5.1 The valuation of development land can be seen from the foregoing sections to require market evidence from not only comparable land sales, but also for a residual valuation, multiple other sources. The depth of evidence assembly and its analysis will reap dividends to valuers who set out their calculations with full supporting evidence, in a format readily understood by not only fellow valuers, but also other professionals, the courts, and most importantly, instructing clients.
- 5.2 Reporting the valuation needs to highlight:
- Methodology of valuation(s) employed;
 - Evidence analyzed and figures adopted;
 - Sources of all information, including that received from other professionals, and:
 - Assumptions made on key issues , such as:
 - (a) What is the optimum development scheme, and why;
 - (b) Construction timeframe and outlays;
 - (c) Fees, charges and taxes incurred; plus:
 - (d) The complexity and risk applicable to the scheme, and hence profit rate adopted.
- 5.3 By agreeing with client key issues at the time of instructions, particularly what relevant documentation or plans can be supplied for potential use by the valuer, coupled with a clear understanding of the development process, surveyors should be well placed to prepare and present to their clients detailed, well supported calculations that accurately reflect not only the property being valued, but also multiple market factors that are prevailing at the date of valuation.
- 5.4 Both the traditional residual valuation and DCF are set out in the appendices, and these examples both assess market value for the same land site. Such differing approaches and calculations, by adoption of the same market data, provide most similar values. Whilst DCF may not be often adopted, its replacement by analysis of comparable land sales should readily supplement and add support to a carefully completed residual land valuation. Development land values in Hong Kong are exceptionally high by world standards, and valuers must ensure full supporting evidence when completing such major assessments that may have major implications for the parties involved.

Appendix 1

Potential Adjustment Factors for Premises Comparables

For Domestic Premises	For Offices
<ul style="list-style-type: none"> • Location • Size • Floor Level • Layout • Headroom • Orientation and Views • Lighting and Ventilation • Noise and Privacy • Internal Condition, Fixtures and Fittings Quality • Provision of Lifts • Car Parking Space Ratio • Scale of Development • Communal provisions such as clubhouse, gym, pool, etc. • Ancillary Areas e.g. roof, flat roof and access to such private roof(s). 	<ul style="list-style-type: none"> • Location and access • Architectural design to lobby and exterior : prestige • Size and floorplate efficiency • Floor Level • Quality and Condition of unit • Views • Headroom • Lift Provision • Car Parking Space Ratio • IT backbone installations • Fit Out - Ceilings, central a/c, lighting provision etc. • Washrooms/Executive washrooms
For Retail Premises	For Hotels
<ul style="list-style-type: none"> • Location/Trading Potential • Frontage and Return Frontage • Size • Layout • Depth • Headroom • Visibility and Access (Steps) • Signage • Ancillary Areas e.g. cockloft, yard, flat roof • Trade Mix 	<ul style="list-style-type: none"> • Locality and Access • Room Sizes and Fit Out • No. of Rooms • Occupancy Rate • Size of back of house • Ancillary Guest Facilities - F&B; gym • Views • Integral retail mall • REVPAR - Revenue per available room • Management Agreement
For Industrial	For Vehicular Parking
<ul style="list-style-type: none"> • Location and Access • Size • Floor Level • Clear Headroom and Column Grid • Lift Provisions • Building Design Features (Container Hoist) • Floor loading • Lorry Parking and Raised Loading Bays with Direct Lift Access 	<ul style="list-style-type: none"> • Location and Access (i.e. carpark demand varies location from location, e.g. HK island vs NT) • Vehicular Car Parking Space Ratio • User/ Buyer restrictions in land lease • Scale/Layout/ Disposition/Ease of access • Vehicular Access - Car lift/Car Ramp • Ceiling Height - vehicle racking

Appendix 3

Example 1 (Cleared Site)

Example for reference only

Residual Valuation - Short Form Approach for Development Period Example 1 - Using Gross Floor Area and Saleable Area

Development Period - 40 months, including 9 months for demolition

1. Gross Development Value

			\$
G/F Shop	(520 - 80) sq.m.s. @	\$500,000/sq.m.s.	220,000,000
1/F Shop	(380 - 48) sq.m.s. @	\$160,000/sq.m.s.	53,120,000
2/F Club House and Landscaped Area :			-
3/F - 24/F Domestic	(204.5 - 48) sq.m.s. x 22 floors @	\$200,000/sq.m.s	688,600,000
25/F Private Roofs	(204.5 - 170) sq.m.s. ⁽¹⁾ @	\$40,000/sq.m.s.	1,380,000
		Total GDV :	963,100,000
Less : Marketing and legal ('M&L') costs @	6% of GDV		- 57,786,000
		Net Receipts :	905,314,000
Deferred for (40 - 9) = 31 months at 4% p.a. ⁽²⁾		x	0.90364
			818,077,943

2. Less : Construction Outlays

Construction costs ⁽³⁾	189,487,518		
Professional fees @ 6%	11,369,251		
Profit on Cost @ 15% ⁽²⁾	30,128,515		
	Total costs :	230,985,284	
Deferred for ½ of 31 months at 4%		0.95060	- 219,574,611
	= Cleared Site Value + Site Profit		598,503,332
Less : 15% Developer's profit on Site Value :		÷	1.15
= Cleared Site Value (c/f) :			520,437,680
		say :	\$520 million

Example 1 (Cleared Site)

Example for reference only

Residual Valuation - Short Form Approach for Development Period Example 1 - Using Gross Floor Area and Saleable Area

Development Period - 40 months, including 9 months for demolition

Notes: - Cleared Site Value Accommodation Value ('AV')
= (520.44 m. ÷ 5,400 sq.m.) = \$96,378/sq.m.

- (1) Area of private roofs is for illustration purpose only.
- (2) Interest rate of 4% and developer's profit of 15% are adopted for illustration purpose only.
- (3) Refer to the attached HKIS Building Cost Pro-forma for details.
- (4) Before stamp duty and legal costs.

Appendix 3

Example 2 (Development Site with Existing Buildings / Structure(s))

Example for reference only

Residual Valuation - Short Form Approach for Development Period Example 1 - Using Gross Floor Area and Saleable Area

Development Period - 40 months, including 9 months for demolition

1. Gross Development Value

			\$
G/F Shop	(520 - 80) sq.m.s. @	\$500,000/sq.m.s.	220,000,000
1/F Shop	(380 - 48) sq.m.s. @	\$160,000/sq.m.s.	53,120,000
2/F Club House and Landscaped Area :			-
3/F - 24/F Domestic	(204.5 - 48) sq.m.s. x 22 floors @	\$200,000/sq.m.s	688,600,000
25/F Private Roofs	(204.5 - 170) sq.m.s. ⁽⁵⁾ @	\$40,000/sq.m.s.	1,380,000
Total GDV :			963,100,000
<u>Less</u> : Marketing and legal ('M&L') costs @ 6% of GDV			- 57,786,000
Net Receipts :			905,314,000
Deferred for 40 months @ 4% p.a. ⁽⁶⁾			x 0.87745
			794,367,769

2. Less : Cost of Site Clearance

Demolition Cost 2,500 sq.m. @ \$2,000/sq.m.	5,000,000	
Professional fees @ 6%	300,000	
Profit on Cost @ 15% ⁽⁶⁾	795,000	
Total costs :		6,095,000
Deferred for ½ of 9 months @ 4% p.a. ⁽⁶⁾	0.98540	- 6,006,013
		788,361,756

Example 2 (Development Site with Existing Buildings / Structure(s))

Example for reference only

Residual Valuation - Short Form Approach for Development Period Example 1 - Using Gross Floor Area and Saleable Area

Development Duration - 40 months, including 9 months for demolition

3. Less : Construction Outlays

Construction costs ⁽⁷⁾	189,487,518	
Professional fees @ 6%	11,369,251	
Profit on Cost @ 15% ⁽⁶⁾	30,128,515	
	<hr/>	
Total costs :	230,985,284	
Deferred for 9 months and ½ of 31 months @ 4% p.a. ⁽⁶⁾	0.92305	- 213,210,966
	<hr/>	<hr/>
		575,150,790
<u>Less</u> : 15% Developer's profit on Site Value :		÷ 1.15
		<hr/>
Site Value with Existing Building(s) / Structure(s) ⁽⁸⁾ :		500,131,122
say :		\$500 million
		<hr/>

Notes: - AV with structures on-site ($\$500 \text{ m.} \div 5,400 \text{ sq.m.} = \$92,593/\text{sq.m.}$)

(5) Area of private roofs is for illustration purpose only.

(6) Interest rate of 4% and developer's profit of 15% are adopted for illustration purpose only.

(7) Refer to the attached HKIS Building Cost Pro-forma for details.

(8) Before stamp duty and legal costs.

Appendix 4

Discounted Cash Flow

Date of Valuation: XX / XX / XX
 Residential GDV: \$688.60million⁽²⁾
 Private Roofs GDV: \$1.38million⁽²⁾
 Retail GDV: \$273.12million⁽²⁾
 Demolition Cost: \$5.00million⁽²⁾
 Construction Cost: \$189.49million⁽²⁾

(HK\$ Million)

End of Year	0				1				2				3				4		Sub-total	
	End of Quarter	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1		13
No. of Quarters	0	1	2	3	4	4	4	4	4	5	6	7	8	9	10	11	12	13		
Development Schedule^{(3),(4) & (5)}		Pre-construction (incl demolition)				Construction (until OP)												Post-construction		
Cash Inflow																				
Residential GDV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	688.60
Private Roofs GDV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.38
Retail GDV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	273.12
Total Cash Inflow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	963.10
Cash Outflow																				
Demolition Cost ⁽⁶⁾	-	(1.67)	(1.67)	(1.66)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(5.00)
Construction Cost ⁽⁷⁾	-	(14.58)	(14.58)	(14.58)	(14.58)	(14.58)	(14.58)	(14.58)	(14.58)	(14.58)	(14.58)	(14.58)	(14.58)	(14.58)	(14.58)	(14.58)	(14.58)	(14.58)	(14.58)	(189.49)
Professional Fees ⁽⁸⁾	-	(0.98)	(0.98)	(0.97)	(0.87)	(0.87)	(0.87)	(0.87)	(0.87)	(0.87)	(0.87)	(0.87)	(0.87)	(0.87)	(0.87)	(0.87)	(0.87)	(0.87)	(0.87)	(11.63)
Marketing Costs ⁽⁹⁾	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(57.79)
Total Cash Outflow	-	(17.23)	(17.23)	(17.21)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(263.91)
Net Cashflow (Before Required Profit)	-	(17.23)	(17.23)	(17.21)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	(15.45)	699.19
PV Factor (End of Year 0) ⁽¹⁰⁾	1.00000	0.99010	0.98030	0.97059	0.96098	0.95147	0.94205	0.93272	0.92348	0.91434	0.90529	0.89632	0.88745	0.87866	0.87000	0.86134	0.85277	0.84429	0.83591	0.82759
NPV as at End of Year 0	-	(17.06)	(16.89)	(16.70)	(14.85)	(14.70)	(14.55)	(14.41)	(14.27)	(14.13)	(13.99)	(13.85)	(13.71)	(13.57)	(13.43)	(13.29)	(13.15)	(13.01)	(12.87)	(12.73)
Total NPV as at End of Year 0	602.73																			
Less Required Profits⁽¹¹⁾																				
Profit on total development cost	(28.90)																			
Profit on land value	(74.86)																			
Cleared Site Value	499.06																			

Discounted Cash Flow (cont'd)

Explanatory Notes:

1. This example adopted a cash flow model on a quarterly basis, which should be subject to the characteristics and any specific consideration of the subject site being valued.
2. The same figures as adopted in the example residual valuation in Appendix 3.
3. Pre-construction period includes ground investigation work, demolition work and all necessary pre-construction submissions, such as building plans (e.g. foundation plans, excavation lateral supports plans, demolition plans and hoarding plans), any technical submission required under the lease (e.g. tree removal and landscaping proposal) and submissions for any 'design, disposition and height' approval as may be required.
4. Construction period counts from commencement of foundation work, through the basement and superstructure construction works, until an occupation permit is granted.
5. Post-construction period includes works after OP (e.g. fitting out and landscaping work) and application for certificate of compliance / consent to assign under the lease.
6. This example assumes an even spread of demolition cost over the demolition period of 9 months. The balance amount in Quarter 3 of Year 1 is obtained by deduction based on the total demolition cost. Appropriate figures should be adopted with respect to the specific information and/or relevant advice from other experts that may be available for the development being valued.
7. This example also assumes an even spread of the total construction cost over the whole development period. The balance amount in Quarter 1 of Year 4 is obtained by deduction based on the total construction cost. Again, appropriate figures should be adopted with respect to the specific information and/or relevant advice from other experts that may be available for this development.
8. This example assumes a professional fee at 6% on total construction cost, and is for the purpose of illustration only.
9. This example assumes a total marketing cost at 6% on total GDV, also for the purpose of illustration.
10. The discount rate is based on the cost of finance in this example, and here adopted a rate of 4% pa (i.e. 1% per quarter) as the cost of finance for the purpose of illustration.
11. This example assumed a required profit of 15% on the total development cost (except marketing cost) and land value, again only for the purpose of illustration.

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