



APPENDIX 14A

ACCOUNTING FOR GROUND LEASES IN THE AFTER-TAX CASH FLOW PROFORMA

A **ground lease** typically refers to the leasing of very long-term possession and development rights from the permanent landowner (the ground lease lessor) to a ground lease tenant (the lessee). Ground leases are relatively rare in the United States, where most properties are in **fee simple** ownership, meaning that the owner has complete and perpetual ownership rights. But ground leases are more common in some other countries. For example, many properties in some European countries are owned by old aristocratic families or institutions. In China since the Communist Revolution the state owns all land. In the United States, ground leases are often associated with land ownership by nonprofit institutions (such as universities, churches, or hospitals) or local government entities (such as for urban renewal or community development projects). They may also simply reflect the desire on the part of some private families to retain ultimate long-run ownership of a patrimony. A typical ground lease might give the tenant the right to pretty much do anything they want with a property, including to develop or redevelop structures on it, for a period of 99 years.¹ Of course, as time goes by, the 99-year horizon shrinks.

In return for the payment by the lessee to the landowner of regular ground lease rental payments (or possibly a single up-front lump-sum price, or some combination of the two), the ground lease provides its lessee with possession and use (and normally development) rights for the duration of the lease, and this claim is referred to as the **leasehold**. (A property in fee simple ownership, not subject to a ground lease, is referred to as a **freehold**.) Normally the lessee is free to sell his leasehold in whole or in part, as well as to sublease it (or parts of it), but of course always subject to the underlying ground lease (which will ultimately expire, and which may also contain restrictions or covenants).

Ground leases are useful devices when a fee simple property owner wishes to effectively “sell” a very large proportion of the value of the property without permanently losing all ownership and control rights. They can also be used to guide or regulate the nature of development or operation of a property while delegating the actual development and operation to another entity with specialized capability. This can add value to the property or provide for nonpecuniary objectives of the original property owner, relative to what would be possible if the owner tried to do everything himself or simply sold the property entirely as a freehold.

A property that is split into two parts under separate ownership—a leasehold and the (now ground-lease-encumbered) land ownership—may lose some value. This can occur because of potential conflict of interest between the ground lease lessee and lessor, or a loss of optionality in the property. The lessee only has claim to profits from the property as long as the ground lease is in effect. And apart from lease default or other provisions explicitly in the lease, the landowner cannot gain control over the property until the lease expires. This temporal truncation of control and benefit can become detrimental. For example, consider

¹In the United States, some states limit ground leases to no more than 99 years. In China, “sale” of state land has usually been limited to leases of 70 years in recent years. Some leases in the United States and Europe are written for terms of more than a century. Other ground leases that are focused on specific development projects may be for terms as short as 25 or 30 years, long enough for the developer to obtain a full return and pay off even a very long-term mortgage, but short enough so that the landowner remains substantially in the picture regarding the long-term control and usage of the site. Many ground leases include renewal option provisions, typically based on market conditions prevailing at the time of lease expiration.

the situation as the term of the ground lease approaches to, say, within 20 or 10 or 5 years from the present. The highest and best use of the site might be to redevelop it to a more valuable use, but only the ground lease tenant currently has the right to redevelop the site, and that tenant would only benefit from the redevelopment for the remaining term of the ground lease, which might not be long enough to recoup the cost of the (optimal) redevelopment project. Or consider the ability to lease out space in a building on the site as the term of the ground-lease approaches. The ground lease lessee cannot sublease space to an occupant/user beyond the expiration of the ground lease without making arrangements with the landowner. This might preclude the ability to lease the space to a lucrative tenant.

Of course, these types of problems can be foreseen to some extent, and a well-crafted ground lease may attempt to mitigate damage by including various types of options in the lease, in both directions, such as renewal options for the tenant and lease termination options for the landlord. Apart from provisions in the existing lease, the two parties can try to work out business arrangements such as lease modifications or buy-outs or joint ventures, which can facilitate profitable management of the site as the lease term approaches.

With the above considerations in mind, let us label as “P” the value of a property in fee simple ownership, and “P*” the value of the same (or identical) property split into two claims, a long-term ground lease and the underlying land ownership encumbered by the lease. We recognize that P and P* may differ as the ground lease term approaches, probably with $P^* < P$ for the afore-noted reasons, though in particular circumstances it could be that the ground lease arrangement actually adds value, as suggested earlier, and in any case it is probably typical that: $P^* \approx P$.

Now let us walk through a simplified version of the balance sheet and income statement for this example property, as related to the after-tax cash flow proforma discussion in sections 14.1 and 14.2 of the main text. First consider Exhibit 14A-1, which depicts the simplest case. The fee simple property is bought free and clear with all equity, no debt. The price P is paid and this is the value of the investor’s asset on the left-hand side of the balance sheet (“T-chart”), balanced by an equal value of owner’s equity on the right-hand side. Although the value of the property is a single undivided perpetual claim on both the land and any building structure on the land, we may conceptually think of the value P as having two additive components, the land value (L) and the structure value (S), as described in section 5.4

EXHIBIT 14A-1 Regular Fee Simple Property Purchase, No Debt

Capital Account (balance sheet) “T-chart”							
Assets	Liabilities & Equity						
Purchase Price: • P	Liabilities: • none						
<div style="display: flex; align-items: center;"> <div style="margin-right: 5px;">Structure: S } Land: L }</div> <div style="font-size: 2em;">}</div> <div style="margin-left: 5px;">P</div> </div>	Owner’s Equity: • P						
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Income Statement (accrual):</td> </tr> <tr> <td style="padding: 5px;">Revenues</td> </tr> <tr> <td style="padding: 5px;">– Operating Expenses</td> </tr> <tr> <td style="padding: 5px; border-top: 1px solid black;">NOI</td> </tr> <tr> <td style="padding: 5px;">– Depreciation (of P – L)</td> </tr> <tr> <td style="padding: 5px; border-top: 1px solid black;">Net Income</td> </tr> </table>		Income Statement (accrual):	Revenues	– Operating Expenses	NOI	– Depreciation (of P – L)	Net Income
Income Statement (accrual):							
Revenues							
– Operating Expenses							
NOI							
– Depreciation (of P – L)							
Net Income							

EXHIBIT 14A-2 Regular Fee Simple Property Purchase, with Mortgage

Capital Account (balance sheet) "T-chart"	
Assets	Liabilities & Equity
Purchase Price: • P	Liabilities: • M = Mortgage Amt
<hr style="width: 50%; margin-left: 0;"/> Structure: S } P Land: L }	Owner's Equity: • P – M
	<hr style="width: 50%; margin-left: auto; margin-right: 0;"/> P

Income Statement (accrual): Revenues – Operating Expenses <hr style="width: 80%; margin-left: 0;"/> NOI – Depreciation (of P – L) – Interest (on M) <hr style="width: 80%; margin-left: 0;"/> Net Income
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back in Chapter 5.² In the income statement, from an accrual accounting perspective the property's NOI is reduced by its annual depreciation expense to arrive at the net income amount that would be relevant for the owner's taxable income. Only the structure component of property value is depreciable (as described in section 14.2.3), the amount P–L, so the depreciation tax shield is reduced to some extent by the land value component of the property.

Now look at Exhibit 14A-2. Here we depict the same property purchase, only now the investor has taken out a mortgage loan, in the amount of "M," to finance part of the purchase price. Thus, in the balance sheet we now have a liability of M, and the owner's equity is reduced to P–M. In the income statement, the taxable income is now not only net of the depreciation expense (which remains the same as before), but also is reduced by the interest expense component of the debt service of the mortgage, the loan's interest rate times the loan amount, M. Of course, this interest expense is a cash outflow from the property owner (equity investor), as described in section 14.1.

Now consider Exhibit 14A-3. Here the property has been split into a long-term leasehold (subject to a ground lease) and its residual value retained by the landowner encumbered by the ground lease. As described earlier, the property's overall value (the sum of the value of the two claims, that of the ground lease lessee and lessor) may be slightly changed, represented now by P* instead of P. The value of the residual claim retained by the landowner (the present value of the property after the current ground lease expires) is designated as "RV." The value of the leasehold, which is the asset purchased by the investor, is therefore P* – RV. But the investor must pay ground lease rent (or as noted, it might be an up-front lump sum, but here we'll assume it is an annual rental payment). The present value of these contractual ground lease payments is designated as "GL" in the exhibit. This is a liability to the leasehold investor, similar to (indeed, normally senior to) the present value of mortgage loan debt service payments.³ The property's landowner (the ground lease lessor) therefore retains a total present

²Recall that there may be different conceptions and definitions of the breakout of P into S and L, based on a legal/appraisal perspective (L is market value of the property as if vacant of any structure), or an economic perspective (L is development or redevelopment option value of the site). Something closer to the former definition typically applies for determining the depreciable cost basis of the property.

³Ground lease rental payments may be fixed amounts, or they may have fixed step-ups or adjustments related to the local rental or asset market values or to general inflation or interest rates, or they may be tied to the rents or net income earned by the ground lease tenant, or to the revenues generated by the property, or various other formulations.

EXHIBIT 14A-3 Property Purchase, with Mortgage and Ground Lease

Capital Account (balance sheet) "T-chart"	
Assets	Liabilities & Equity
Purchase Price (Leasehold): $RV = \text{Residual Value}$ } • $P^* - RV - GL$	Liabilities: • $M^* = \text{Mortgage Amt}$ • $GL = \text{PV}(\text{Ground Lease Rent})$ Owner's Equity: • $P^* - RV - M^* - GL$
$P^* - RV$	$P^* - RV$

Income Statement (accrual): Revenues – Operating Expenses <hr style="border: 0; border-top: 1px solid black;"/> NOI – Depreciation (of $P^* - RV - GL$) – Ground Lease Rent – Interest (on M^*) <hr style="border: 0; border-top: 1px solid black;"/> Net Income

<p>P^* may be less than P due to loss of optionality or lessor/lessee conflict of interest.</p>		<p>M^* may be less than M due to $P^* - RV < P$ or priority of Ground Lease Rent over debt service.</p>
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value of $RV + GL$. In Exhibit 14A-3 we also assume that the leasehold investor has borrowed an amount M^* to finance the purchase of the leasehold, which is assumed to be worth more than GL (that is, $P^* - RV - GL > 0$). For example, the landowner might have sold the leasehold to the investor with the property being vacant or in need of major redevelopment, with the investor adding considerable value to the property by the development project. So the ground lease rental payment would only reflect an annualization of the land value component excluding the structure value. Or the property might already be fully developed with the landowner electing to cash out most of its value up front by the sale of the leasehold to the investor subject to only a small continuing ground lease rental payment.

The mortgage amount, M^* , which the investor has used to finance part of the leasehold purchase, might well be less than the amount M in Exhibit 14A-2, assuming similar overall leverage in the investment. This is because, in the first place, the real property collateral securing the mortgage loan might be at least slightly less, as $P^* - RV$ would likely be less than P (other things being equal). Furthermore (and perhaps more important), normally the ground lease rental payments would take seniority over the mortgage debt service, for if the ground lease tenant (the mortgage borrower) defaults on the ground lease rental payments, then the landowner can claim the entire property back without being subject to the mortgage (nullifying the leasehold that secured the mortgage), unless specific provision has been made bringing the landowner in as a party to the loan in some capacity (such as subordination of the ground lease to the loan). This leaves less cash flow available from the property to service the debt. In effect, the ground lease rental payment obligation in itself acts like (senior) debt financing of the leasehold purchase for the investor, resulting in the leasehold itself being levered to some extent.⁴

The result is that the investor has obtained a leasehold asset that is worth $P^* - RV$ but subject to liabilities worth $M^* + GL$, leaving owner's equity (for the leaseholder, the investor) equal to $P^* - RV - M^* - GL$. The amount of debt or debt-like financing of the leasehold purchase is $M^* + GL$, not just M^* . (However, as noted, $M^* + GL$ might be no greater than the corresponding amount of debt financing labeled M in Exhibit 14A-2 for the case where the property is bought fee simple.)

⁴This assumes the ground lease rental payments are not perfectly correlated with the NOI generated by the property. In the extreme, if the ground lease rent is literally a fraction of the NOI (and no matter whether the NOI is positive or negative), then effectively the landowner is like an equity partner of the leasehold investor rather than like a debt investor, and in this circumstance the ground lease does not add to the leverage in the leasehold.

In the income statement the NOI presumably remains the same as in the previous two exhibits (as we're assuming it is the same or an identical property), as this is governed by the usage value of the property in the space market. But now the taxable income is reduced not only by the mortgage interest expense (which is now based on M^* instead of M , therefore probably a smaller amount of interest) but also by the ground lease rental payment. Furthermore, the entire leasehold purchase price of $P^* - RV - GL$ can be depreciated for tax purposes, as there is generally presumed to be no "land" component in the leasehold (at least for income taxation purposes).

In summary, the accounting for properties that are actually long-term ground leases (leasehold) rather than freeholds, and the resulting determination of taxable income for purposes of producing an after-tax cash flow proforma as discussed in sections 14.1 and 14.2 of the main text, is a bit more complicated. But in many cases the result is pretty similar to what the overall investment situation would be for a freehold, particularly if the ground lease still has a very long term on it and any ground lease rental payments are relatively small compared to the property NOI. However, leaseholds are typically at least slightly more risky (effectively levered) compared to freeholds, and typically involve at least a slight reduction in asset value (missing the residual value and possibly some optionality value) compared to an otherwise identical property that is a freehold. A leasehold may therefore exhibit a slightly higher cap rate than an otherwise identical freehold.