





ground rent cash flows are both wellsecured and stable.

A ground rent portfolio can offer a running yield that may be considered attractive compared to fixed income investments, with individual residential and commercial ground rents typically providing a running yield of 2.25%-3.75% and 2.75%-4.00% per annum, respectively, which may rise over time. An institutional investor could invest in a portfolio directly or lend against such a portfolio, as the running yield provides a reliable source of income to service the debt. If an investor lends against a portfolio of residential ground rents in the UK, it may be at a rate of mid swaps (of appropriate term) plus 150bps+. At the time of writing, debt secured against commercial ground

lending to residential ground rent portfolios. For insurers that write deferred annuities or buy them through bulk-purchase annuity transactions, ground rents may be particularly attractive for matching purposes, as they are one of the few assets that can provide income for more than 60 years.

Due to the fairly illiquid nature of ground rents, the asset class is likely to be best suited for institutions with either illiquid liabilities or limited liquidity requirements as they will be able to provide a number of attractive benefits.

In this paper, we explore ground rents as an asset class and consider market, investment and regulatory implications.

What are ground rents?

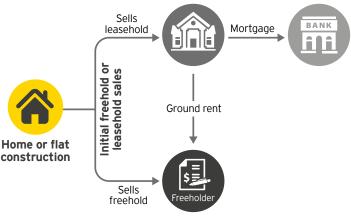
A ground rent is a type of illiquid asset that exists due to the freehold-leasehold structure which is common in the residential and commercial property markets in Europe, particularly in the UK. A freehold is the highest form of property ownership over the land and all buildings attached to such land. A leasehold is a form of property tenure whereby a leaseholder buys the right to occupy a property for a given length of time.

For newly developed properties, the developer can sell the leasehold interest of the property. The developer receives a lump sum in return for granting the leasehold interest where this lump sum is typically the vacant possession valuation of the property. In addition, the leaseholder pays a regular payment (usually annually) to the freeholder for the duration of the lease, namely ground rent. It is also possible for a developer to sell the freehold to a property where the developer receives a lump sum equivalent to the investment value of the property. Generally, this is the vacant possession valuation, plus earnings from ground rent payments.

Market considerations

An awareness of ground rents and their attractive characteristics among a small number of institutional investors has led to an increased popularity for this asset class. The ground rent market is composed of existing ground rents and those that are created by developing new properties.

Ground rents are usually acquired through private transactions: in property auctions,



Ground rent or debt service

Figure 1: Ground rent illustration for a residential property

through specialist brokers and, in the case of newly created ground rents, by going directly to property developers. While banks are the traditional lender for the property sector, they are often unwilling to lend beyond 10 years. This could be considered suboptimal for an asset that produces income for more than 60 years and provides an opportunity for other institutions to lend in this space.

Lending in this market typically takes place via private transactions, which makes these assets difficult to source and therefore more relationship-dependent. The relationship-driven nature requires investors to have a well-established network of contacts in order to gain access to opportunities in the market. Investors will also build and maintain a relationship with the borrower, which is important

Definitions for the terms in bold can be found in the glossary of terms on page 9.

in the event covenants are stressed or breached. The challenge that investors face is comparing the benefits against the costs of allocating resources to a relationshipbuilding team.

Savills, a global real estate services provider, estimated that in 2016, nearly $£250m^1$ of ground rent capital value will be generated from newly built homes in the UK alone. On the debt side, EY has helped structure a number of debt deals

for larger portfolios over the last few years. These portfolios generally comprise more than 1,000 properties spread across several regions.

Investment characteristics

Before investing in ground rents at the expense of other asset classes, insurance investors need to carefully assess whether

the investment is suitable for their business. For example, does the cash flow profile fill any asset liability gaps? Does the insurer require inflation protection?

In Table 1.1, we highlight distinguishing features of directly held ground rents and the key risks associated with them, compare directly held residential and commercial ground rents, and consider the practicalities of valuing ground rent debt.

Directly held ground rents: typical features

Table 1.1

Long and predefined cash flow profile	Ground rents tend to be long-dated with predefined cash flows. These features may be attractive to meet long-term annuity liabilities (for example, deferred annuities in the UK; participating business in Germany, France and Italy; and pension products in New Zealand and Scandinavia).
Inflation linkage	Residential ground rent payments typically rise in line with one of the following triggers: Inflation measures (e.g., retail price index or consumer price index) Fixed investment (e.g., doubling) Open market review (upward in line with the increase in capital value of the property) While ground rents can provide some inflation protection for insurers with inflation-linked liabilities, the payments typically "step up" only every 5 or 10 years (or longer) in line with one of the above triggers. Commercial ground rents can potentially be "manufactured" with a desired linkage if this can be negotiated with the ground rent seller.
Relatively low credit risk	 While there is little public data, anecdotally, ground rents have a default rate close to zero for two main reasons: Payments required by the lessee are small relative to the value of the property, so the lessee has a strong incentive to pay rather than forfeit the property. The present value of the future stream of ground rents, plus reversion of the freehold, tends to be much lower than the value of the leasehold property. In the event of default on the ground rent payments, if the freeholder repossesses the leasehold, he or she has taken possession of an asset much more valuable than the original asset.
Ancillary income	This relates to residential ground rents and makes income available to direct owners. The income includes any lump sums from lease extensions, enfranchises and service management fees that increase the total return of the asset. For lenders, features of the ancillary income may act as credit enhancements in the debt structure and add further security.

 $^{1.\ \}hbox{\it ``Spotlight: Alternative Residential Investments,'' Savills World Research, UK Residential, Spring 2014.}$

Residential or commercial ground rents?

In this section, we highlight some of the distinguishing characteristics of directly held residential and commercial ground rents and explore why these would be of interest to insurance investors.

Ground rents fall into two categories: commercial and residential. There are many different types of commercial ground rents, including offices, industrial, retail, leisure and hotels, while residential ground rents relate to houses, condominiums, flats or apartments.

The cash flows and many of the risks are consistent for residential and commercial ground rents. However, there tend to be fewer borrower options in a commercial ground rents portfolio, e.g., they tend not to offer the leaseholder lease extension or purchasing options, removing

some of the cash flow uncertainty that might exist.

There are commonalities and differences in some of the main features of directly held commercial and residential ground rent portfolios that are available for purchase, as shown in Table 1.2.

Table 1.2

Features	Residential	Commercial	
Cash flow	Ground rent and ancillary income		
Asset type	Freehold or ultra-long leasehold (head lease)		
Security preference	Super senior		
Number of assets	Often more than 1,000	Typically 1-5	
Counterparties	Freeholder, leaseholder	Freeholder, leaseholder, tenant	
Collateral value	Highly over-collateralized: e.g., LTV less than 10%	Significantly over-collateralized: e.g., LTV between 20% and 40%	
Risk of vacant properties	Very low	Can be expected for a certain duration between tenants, but with underlying leaseholder obligation still in place, so rent is still likely to be paid	
Dilapidation risk	 Not an operating asset Property value can be enhanced through refurbishment following dilapidation Vacant possession value above ground rent obligations even in extreme scenarios 	 Higher, but: Covenants can be included in the lease that require the tenant to maintain the property Dependent on financing terms Property value can be enhanced through refurbishment following dilapidation Vacant possession could potentially be stressed to less than the ground rent obligations in extreme scenarios – depending entirely on asset and location 	
Market-perceived risk of default	Low or non-existent	Low. Requires two conditions: Tenant defaults Leaseholder contemporaneously insolvent	
Recovery mechanism	Quick and certain (easily executed by agents): sale of vacant possession even at high discount leads to significant over-collateralization	 Recovery via vacant possession sale or signing of new tenant may extend over a long period of time Slightly slower process with more operational involvement: vacant possession sale or new tenancy may be net of significant refurbishment costs 	

Ground rents: risks

There are a number of risks associated with investing in ground rents. Table 1.3 highlights the possible risks associated with ground rent-backed debt.

Table 1.3

Risk	Details	Potential areas of mitigation
Enfranchisement – residential ground rents only	Enfranchisement allows leaseholders to purchase the freehold, leading to an alteration to the initially expected cash flow profile.	Purchase ground rents for flats rather than houses. Enfranchisement is less likely as all lessees in a block of flats must agree to the enfranchisement.
		Structure the contract in such a way that risk of enfranchisement could be more predictable, e.g., offer favorable terms for enfranchisement at certain times during the contract.
Lease extensions – residential ground rents only	Lease extensions can give leaseholders the right to buy an extension of their existing lease. For example, in the UK, if the lease extension is obtained through the relevant statutory legislation ² , then there will be no future ground rent payable for a term of 90 years, plus the remaining term of the existing lease. This is in contrast to privately negotiated lease extensions, which may still require ground rent payments.	Lease extension risks can be reduced by only purchasing ground rents with a long lease term.
External risks (e.g., natural disasters)	External factors such as natural disasters (e.g., floods or hurricanes) could damage or destroy the underlying property. The cost of repairing the property may not be fully recoverable from the building's insurance, leading to large costs to restore the property.	The freeholder is required to procure building insurance. As such, in the event of external risks, the ground rent is still due and can be claimed.
Political and legal risk	A freehold-leasehold structure is embedded within the law of a number of countries. However, there is a remote risk of political reform leading to the abolition of this structure, which could have a large impact on ground rents.	It is difficult to mitigate the potential political risk. However, keeping up to date with regulatory and political updates in relation to ground rents could help investors to foresee any future issues.
Credit risk	Credit risk occurs on ground rents when the tenant of the leasehold property fails to pay the ground rent.	The underlying property is typically worth more than the ground rent and the freeholder is the most senior interest in the structure of property ownership. Therefore, it is likely that the freeholder will have a level of protection against loss in the event of default.

^{2.} Leasehold Reform, Housing and Urban Development Act 1993.

Practicalities of ground rent-backed debt valuation

As for other illiquid assets, there is no market from which traded prices can be drawn to set valuations. The ground rent debt markets, in particular, could be viewed as especially opaque.

Therefore, ground rent debt is likely to be a mark-to-model asset. Certain elements of the debt, such as any inflation linkage, could be valued using market-traded instruments. Other features of value, such as the non-inflation-linked portion of the debt, could be built up either by (i) choosing an appropriate market proxy, whose market price can be used to inform the value of the debt portfolio; or (ii) by measuring the performance of the portfolio on certain metrics, such as interest cover, and comparing the portfolio metrics to similar metrics for traded instruments.

A measure of creditworthiness generally would be necessary for such a valuation. Ground rent debt is not normally externally rated. However, insurers or other institutions with a capability to rate debt internally could place a rating on the debt themselves. The super senior nature of the ground rent payments suggests that high investment grade could be achievable.

Operational aspects and portfolio management

When investing in ground rents through a debt instrument, the operational challenges will be similar to other real estate-backed debt; however, the same cannot be said for direct investments. For residential ground rents, acting as the freeholder comes with certain legal obligations in maintaining and servicing the properties. These are less pronounced for commercial ground rents, as it is more common that a commercial lease imposes repair and insurance obligations on the leaseholder. Therefore, for residential ground rents in particular, investors should give due consideration to the borrower's capabilities as a landlord and experience in servicing the properties.

The idiosyncratic features of ground rents prevent standardized processes for administering or servicing the property. As one can imagine, the maintenance requirements for a hotel with facilities such as a swimming pool and a fitness center is much different and complex when compared against a single flat.

Investors face a choice to either manage this directly or to outsource it to a third party. We expect that for institutional investors, outsourcing is the likely outcome, as these tasks are not something a typical investor would specialize in. Outsourcing is generally easier for commercial portfolios, as there is a larger pool of reputable parties who specialize in managing commercial properties. Outsourcing, however, is more difficult for residential portfolios due to the less institutional nature of the residential market. Third parties generally provide services, as shown in Table 1.4.

Table 1.4

Property servicing Insurance applications and centralized procurement of insurance Lease audits against information uploaded to their management information system Credit control Cash reconciliation and reporting Email or document record-keeping between the tenants and the property manager

Solvency II considerations

A key consideration for insurers investing under Solvency II is the relative capital efficiency (and return on capital) for different assets.

When determining the amount of capital to hold, insurers tend to use a standard formula or internal model-based approach. The former is calculated using prescribed stress factors and methods from the Solvency II legislation, while the latter is based on management's view of the risks associated with the asset.

When making any investment decisions under the Solvency II regulatory environment, the capital charge itself should not be viewed in isolation. Instead, a more holistic approach that captures the diversification benefits within the portfolio and its risk-adjusted return on capital would better reflect the asset class's true balance sheet benefits.

Suitable for both internal model and standard formula firms?

Capital requirements for standard formula firms are a function of credit rating and duration. As ground rent debt typically would be unrated and have a long duration (possibly more than 20 years), such debt would come with a large capital charge. Even after allowing for matching adjustment, capital charges could be quite high.

Insurers using internal models can take the asset's perceived low credit risk of ground rents into account in their capital modeling and attract a lower capital charge even if it is held over a long term.

Ground rent debt could, if appropriately structured, attract a high investment-grade credit rating. An internal model may on average yield a spread widening capital charge of 200bps for a Credit Quality Step 2-rated corporate bond. This is in contrast to ground rents, where it is possible to argue a

significantly lower spread-widening capital charge due to their low implied loan to value.

Internal model (or partial internal model) challenges

Compared with the standard formula, internal models tend to require a rich data feed. Unfortunately, data on ground rent transactions (which are predominantly private transactions) tends to be scarce. This data shortage creates challenges when calibrating spread risk, as there is no clear mechanism for decomposing the spread into components attributable to credit and liquidity. Based on recent regulatory communications, such as CP48/16 "Matching adjustment – illiquid unrated assets and equity release mortgages"3 released by the Prudential Regulation Authority in December 2016, regulatory scrutiny for insurers investing in illiquid or internally rated assets is likely to increase and insurers may need to commission third-party assurance when assessing and quantifying the credit and liquidity risks of the asset.

We have constructed a model designed to overcome this issue. Although the specifics of this model are beyond the scope of this paper, we are happy to provide further information – our contact details are on page 9.

Are ground rents suitable for matching adjustment portfolios?

The matching adjustment allows insurers to benefit from holding assets to maturity by increasing the discount rate used in the calculation of the company's Solvency II best-estimate liabilities in a manner that reflects its asset holdings. This higher discount rate reduces the valuation of these liabilities, which ultimately can strengthen an insurer's solvency position.

To apply the matching adjustment, insurers must satisfy strict requirements associated

with their assets and the ongoing portfolio management and governance. As a consequence, there are limitations on which assets qualify for the matching adjustment. To confirm that these assets qualify, insurers should systematically review the features of their portfolio and test them against the qualifying criteria. For example, one of the qualifying criteria is for insurers to demonstrate that the asset generates fixed cash flows.

Commercial ground rents could be negotiated to have fixed cash flows and meet other requirements and, therefore, be "matching-adjustment-compliant." Due to the characteristics of residential ground rents discussed earlier, it is likely that some structuring would be required to verify that the debt cash flows are fixed even if the underlying ground rent cash flows are not.

A common solution adopted in the market is to securitize the cash flows generated from the portfolio into at least two tranches. In a two-tranche structure, the senior tranche would be structured so that it satisfies all the matching adjustment criteria, including fixed cash flows, and has a long duration to maximize the illiquidity premium. The equity tranche would absorb the cash flow uncertainty from the embedded options. The insurer can now reap the rewards from the illiquidity premium in its matching adjustment portfolio and allocate the equity note cash flows to a shareholder fund. Under Solvency II, a structure such as the one described is likely to be classified as a type II securitization, which may result in a capital charge of 100% for insurers using the standard formula. This will not be the case for companies using internal models, as they will be able to capture the benefits of an investment grade senior note.

In addition, it may be possible to create a structure that does not require securitization. In this situation, not all ground rent portfolio cash flows are passed to the debt holder, and those cash flows that are not passed through effectively absorb prepayments as they occur.

^{3.} Bank of England Prudential Regulation Authority, "Consultation Paper | CP48/16," December 2016.

Conclusion

The key benefit from ground rents is that they offer attractive yields with long-term cash flows and a super senior level of credit protection that differentiates ground rents from other assets.

While demand from insurers has been relatively slow, we believe that the attractive features this asset class offers, combined with the potential for matching adjustment eligibility, will drive further levels of investment – not only from insurers, but from pension funds as well.

How can EY help?

While ground rents remain a relatively new asset class for the majority of insurers, EY has the experience and capability to help clients with issues they may face when investing in ground rents. Our credentials from ground rent engagements with clients, as well as our wider insurance investment knowledge, makes us well-placed to provide assistance on this asset class.

Our wide range of service offerings for ground rents include:

- Sourcing ground rents Building and maintaining relationships with ground rent lenders and buyers, identifying opportunities, gaining insights and facilitating investment opportunities between buyers and sellers.
- Facilitating investment Facilitating investment opportunities for institutions looking to enter into this asset class.
- Financing arrangements Providing independent advice to the lender or borrower of debt secured against ground rents in relation to financing arrangements.
- Matching adjustment strategies under Solvency II –
 Advising on structuring solutions and hedging strategies to obtain matching adjustment eligibility for ground rent assets.
- Internal rating systems Developing or validating an internal system used to assign a credit rating to ground rents.
- Operational frameworks for onboarding assets –
 Guiding the development of an operational framework,
 including market-consistent valuation and capital
 methodology for directly held ground rents and ground
 rent-backed debt.



Glossary

Dilapidation risk – the risk of the property falling into disrepair

Enfranchisement – the right of a leaseholder to buy the freehold to the property

Lease extensions – the right of a leaseholder to buy an extension to the term of the lease

Management fees – those paid to either the freeholder or a managing agent to maintain the property

Vacant posession – the estimated value of the property if it were occupied

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