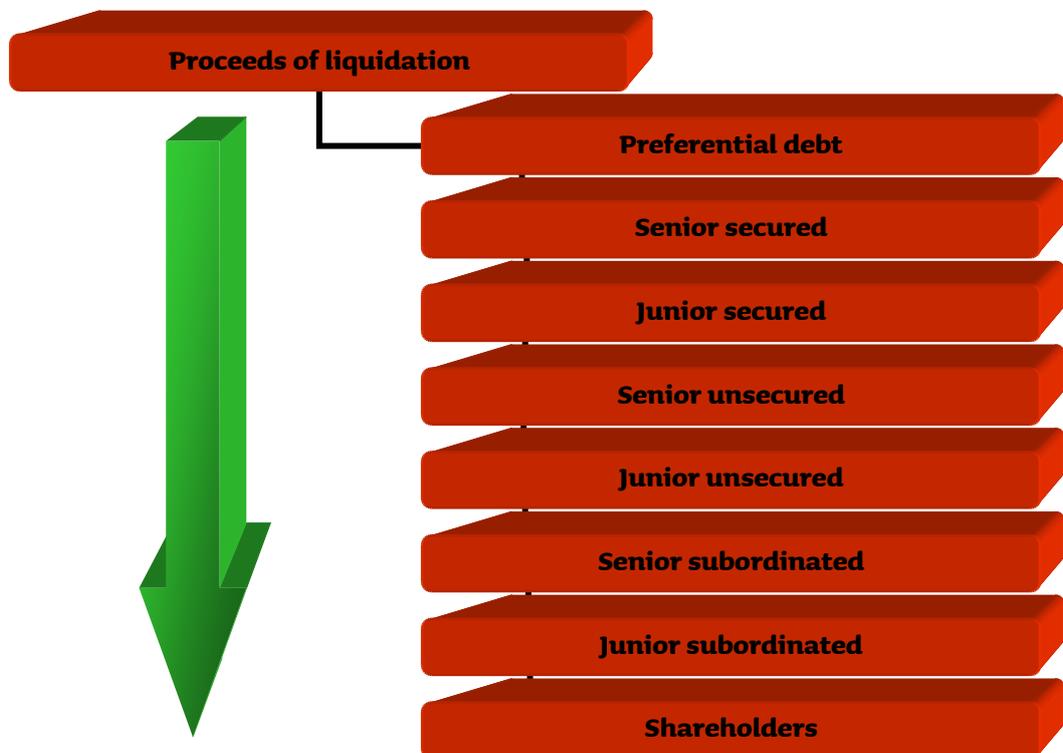


## Capital structure and recovery rates

**In respect of high-yield corporate bonds, the issuer's capital structure is of great importance when it comes to how much of their claim investors can expect to receive in case of bankruptcy. This publication describes the most important elements with regard to capital structure and recovery rates and how those two elements together affect the investor.**

### Debt types

In the event that a company goes bankrupt, the first consequence is that the company's assets are liquidated. Then the process of distributing the proceeds to the respective creditors begins. This distribution follows the order of priority with the highest-ranking creditors being paid first, then those with the second-highest ranking claims and so on. Distribution continues until the assets of the bankrupt estate have been exhausted. The chart below illustrates the various types of debt and the distribution sequence.



### Preferential creditors

Preferential creditors will have their claims covered first. Claims in this category comprise the fee for the liquidator of the company and any legal expenses. Depending on the law of the country to which the bankrupt company belongs, unpaid wages and unpaid tax and certain other claims of unsecured creditors will also rank as preferential debt.

### Secured debt

The second-highest ranking debt is debt for which the company has put up assets as security for its creditors. Specific assets have been put up as security for individual creditors' claims, which means that the proceeds of the relevant asset are paid direct to the relevant creditor. As will be seen from the

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chart, a distinction is made between senior and junior debtors. If one asset has been pledged as security for two lenders, one of whom has senior status and the other junior status, the proceeds from liquidating the assets will first go towards paying the lender with senior status and then that of the lender with junior status. The holder of junior debt runs the risk that the proceeds are insufficient to meet his claim in full.

If there is any money left after all assets have been liquidated and creditors with secured claims have been paid, this will be paid to creditors with no security on any of the company's assets.

There are many types of assets that a company can put up as security to its lenders. However, assets differ widely with regard to negotiability, that is, how easily they can be liquidated. Creditors will therefore always wish the most liquid assets to be pledged to them as security so that they have a better chance of getting all their money back in case of bankruptcy.

Below is a list of assets that can be pledged as security, the most liquid ones at the top:

- Financial assets
  - Financial assets comprise bank accounts, listed securities and debtors. What all these assets have in common is that they can quickly be converted into cash, and their immediate value can be ascertained with high probability.
- Physical assets
  - The physical assets of a company comprise stocks, unfinished products, means of transport (cars, lorries, boats, aircraft etc.), real property and equipment and machinery. What these assets have in common is their being less liquid, and the value they can fetch depends extensively on the underlying market for that particular asset type. Certain types of physical assets such as commodities are generally very liquid, but their value may still fluctuate widely according to the market situation.
- Intangible assets
  - Intangible assets comprise patents and rights whose value depends on the specific products in question and on how easily a buyer can transfer and exploit the rights.
  - Contracts are also intangible assets. They may for instance be business agreements, contracts for the supply of goods or the like. The value of such contracts depends on the counterparty, on whether the contract is transferable and on whether a willing buyer can be found.
  - Unlisted securities, e.g. shares in subsidiaries, debt instruments etc. The liquidity of such paper depends on the financial situation of the subsidiary and on this company's dependence on other parts of the organisation.
  - Goodwill and brands are the least-liquid type of assets and their quality and value are very difficult to ascertain. Moreover, the value depends on a large number of factors beyond the control of the company.

## **Unsecured debt**

Debt for which the lender has obtained no security. This means that, in the event of bankruptcy, such creditors will not receive any money until all the higher-ranking creditors have been paid. This involves a higher risk of there being insufficient money available to pay the debt in full. If the available money is insufficient to pay all the creditors, it will be distributed *pari passu*, i.e. each creditor is paid a sum that corresponds to his claim in relation to the aggregate claim. High-yield corporate bonds typically belong in this debt class.

The category of unsecured debt may again consist of senior as well as junior creditors. Here the same principle applies: the senior lenders will be paid first and then any remaining money will be paid to the junior lenders.

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## **Subordinated debt**

Subordinated debt is debt whose lenders have specifically agreed that their claim is not paid until all other creditors have received payment. This means that the amount left for distribution in the event of bankruptcy will probably be comparatively low. In return for this higher risk, lenders in this category are compensated by a comparatively high coupon rate. It is therefore typically in this category that you find claims under hybrid corporate bonds and of other types of bonds. As for the other categories, this category distinguishes between senior and junior lenders according to the principle mentioned above.

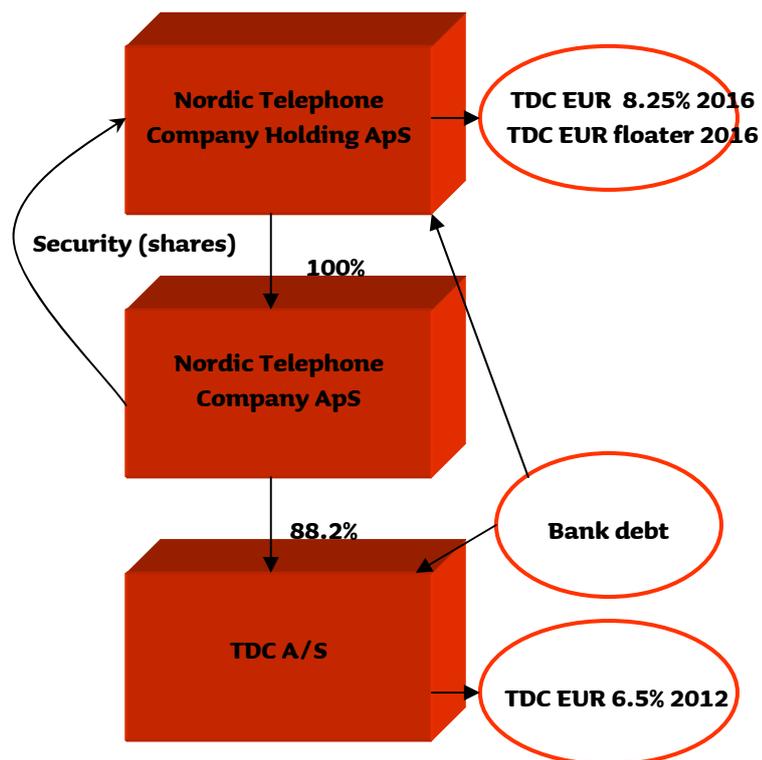
There are two types of subordinated debt. The first one is the simple form with the lender agreeing to receive payment only after all other creditors have been paid in the event of bankruptcy. The other one is more comprehensive, and claims typically come with a number of covenants under which the lender renounces the right of receiving dividend before the higher-ranking lenders have received theirs. There may be covenants which allow the lender to accumulate dividend payments until later or to pay in kind instead of in cash. While the higher-ranking bond holders are being paid, such covenants mean that the bond holders cannot apply for bankruptcy proceedings to commence even if they do not receive any dividend.

## **Structural subordination**

The above paragraphs describe the general priority of creditors in the event of bankruptcy. However, besides the direct classification of debt, it should be noted that a debt may be subject to structural subordination in addition to contractual subordination. Structural subordination means that creditors may rank lower than they would otherwise have done, as a result of the issuer's overall structure. Take for instance a bond which is not issued by the parent company, but by a subsidiary or a holding company. Other things being equal, the holders of that bond will be in a poorer position since payments from the parent company to its subsidiaries and holding companies (dividend) cannot take place until all its other creditors have been paid. The chart below illustrates how the company structure of TDC affects the three bonds currently covered by Jyske Markets' research team.

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As evident from the chart, 88.2% of TDC is owned by a holding company which in turn is owned by a holding company. The TDC EUR 8.25% 2016 and the TDC EUR floater 2016 are issued by NTC Holding and not by TDC, which is of great importance for the order of priority. The two bonds issued by NTC Holding are both senior secured bonds, whereas the bond issued by TDC, TDC EUR 6.5% 2012, is stated to be senior unsecured. The security put up for the senior bonds consists of all the shares in NTC which in practice owns TDC. However, banks have first priority to those shares as security for bank loans. In the event of bankruptcy, all TDC's creditors will be paid first, whereupon any remainder will be paid as dividend and thus pass on to NTC. Then the NTC shares will be liquidated, and the proceeds will go to NTC Holding which will first pay the banks and then the holders of the two bonds. In short, this structural subordination means that even if the TDC EUR 8.25% 2016 and the TDC EUR floater 2016 have been issued as secured debt, their holders are in reality subordinated to all other creditors and thus stand a poorer chance of getting their invested capital back in the event of bankruptcy. It is therefore important in connection with risk assessment to consider both contractual and structural subordination.

There are two methods whereby structural subordination can be avoided: one of them is the issuance of guarantees. In the example above, TDC might guarantee the bond issues of the holding company which might be backed by some of TDC's assets. This would make the bond holders senior to other TDC creditors, and they would no longer be structurally subordinated. The other method features inter-company loans, i.e. the holding company would be the issuer, and the proceeds from the sale be passed on to TDC in the form of a loan. In that case, the bond holder would again have security on TDC's assets and have priority over other creditors. Through one of the above-mentioned methods a bond holder would obtain higher priority, dependent on the wording of the loan or guarantee.

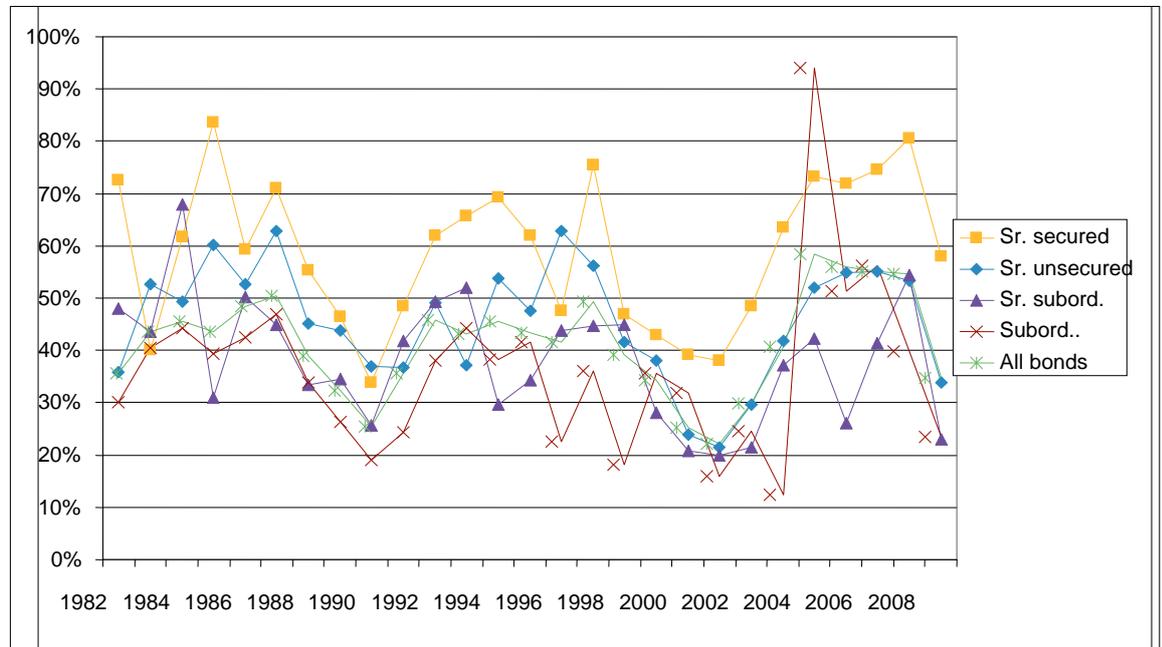
## Recovery rates

When a company goes bankrupt, all its assets are liquidated and the proceeds distributed to the various creditors. As described in the section about debt types, distribution respects the priority of the

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individual creditor. This means that in some instances there will be insufficient funds to meet all the claims; in some instances they will be met partially, in others not at all. The recovery rate describes the proportion of an investor's claim that will be covered in the event of bankruptcy. The chart below shows the historical average recovery rates for various debt types for the period 1982-2008:



Source: Moodys Corporate Default and Recovery Rates, 1920-2008 (excel data)

As evident from the chart, there are wide fluctuations between the annual recovery rates. But it will be seen that the higher the debt priority, the higher the recovery rate. It is also evident that the recovery rate of subordinated debt tends to be somewhat more volatile than that of other types of debt. The table below shows the average recovery rates for the whole period for each individual debt types.

Average recovery rates 1982-2008	
All bonds	41.44%
Senior secured	58.95%
Senior unsecured	45.49%
Senior subordinated	38.29%
Subordinated	35.96%

Source: Moodys Corporate Default and Recovery Rates, 1920-2008 (excel data)

It is evident that there is a significant drop in the expected recovery rate when you move from the highest-ranking debt to the lower-ranking classes.

Take for instance Rexam, whose bonds are covered by Jyske Markets' researchers. You can see how various scenarios may affect the expected recovery rate. The example rests on the 4.375% 2013 bond and the 6.75% 2067 hybrid bond. The 2013 bond ranks as senior unsecured debt, whereas the 2067 hybrid bond ranks as subordinated debt. The first scenario is based on the situation as it was at the end of 2008, with the enterprise value as it then was. The other scenarios rest on EBITDA and enterprise value at end-2008, which result in an enterprise value/EBITDA ratio (multiplier) of 7.83. Also earlier Rexam ratios have been considered as well as ratios of some of its closest competitors. These ratios vary from about 4.87 to no less than 12.10, so Rexam's ratio is realistically taken to fluctuate

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within +/- 20%. Likewise EBITDA has been used with the same variations which resulted in two fictitious enterprise values used in scenarios 2 and 3. Based on figures from Rexam's 2008 accounts, all the company's debt obligations have been added up and broken down into the categories mentioned under debt types. Finally the three different enterprise values have been applied to the various debt classes, resulting in the recovery rates shown in the table below.

All data in GBpm	Scenario 1		Scenario 2		Scenario 3	
	Actual, end-2008	Recovery	Fictitious	Recovery	Fictitious	Recovery
<b>Enterprise value</b>	<b>5,043</b>		<b>4,084</b>		<b>3,227</b>	
<b>- Preferential creditors</b>	-317	<b>100.00%</b>	-317	<b>100.00%</b>	-317	<b>100.00%</b>
<b>= Left for secured creditors</b>	4,726		3,767		2,910	
<b>- Secured creditors</b>	-698	<b>100.00%</b>	-698	<b>100.00%</b>	-698	<b>100.00%</b>
<b>= Left for unsecured creditors</b>	4,028		3,069		2,212	
<b>- Unsecured creditors</b>	-2,682	<b>100.00%</b>	-2,682	<b>100.00%</b>	-2,682	<b>82.48%</b>
<b>= Left for subordinated creditors</b>	1,346		387		0	
<b>- Subordinated debt</b>	-796	<b>100.00%</b>	-796	<b>48.67%</b>	-796	<b>0.00%</b>
<b>= Left for the shareholders</b>	550		0		0	

In the first scenario, there is sufficient money for the holders of both the 2013 bond (unsecured creditors) and the 2067 (subordinated debt) would to have a recovery rate of 100%, and there would be money left over for the shareholders. In scenario 2, there would still be sufficient funds for the unsecured creditors to have their claims paid in full, but the subordinated debt (the hybrid bond) would have a recovery rate of only 48.67%. In the third scenario, the claims of unsecured creditors have a recovery rate of 82.48%, whereas the subordinated creditors get nothing. We stress that the above example is a purely hypothetical one and is therefore not a scenario that Jyske Bank expects to materialise.

It is evident how a bond issuer's debt structure and changes in the market expectations of a company's future performance will strongly affect investors' prospective recovery rate.

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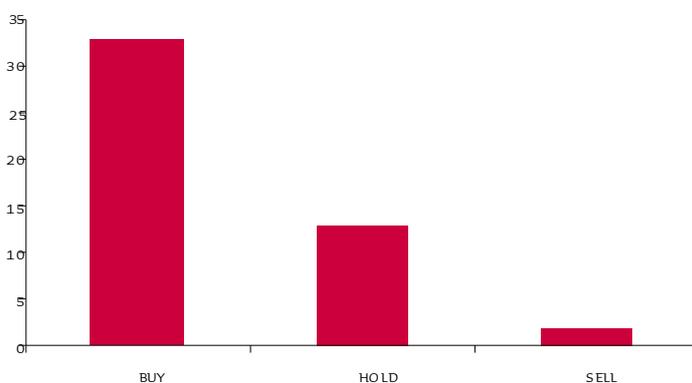
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## Jyske Bank's corporate bond recommendations – current breakdown

### Breakdown of recommendations, corporate bonds (number)



Source: Jyske Bank

### Financial models

Jyske Bank uses mainly Credit Edge from Moody's.

### Risk

Investment in this corporate bond is associated with risk. Movements in the credit market, the sector and/or the news flows, etc. regarding the company may affect the price of the bond. See the front page of the research report for our view of the risk associated with the corporate bond. The risk factors stated and/or calculations of sensitivities in the research report are not to be considered all-encompassing. If the corporate bond is denominated in a currency other than the investor's base currency, the investor accepts an FX risk.

### Update of the research report

The planned update of the report will be prepared immediately upon the release of the company's financial statements.

See the front page for the initial date of publication of the report.

All prices stated are the latest trading prices at the time of the release of the research report, unless otherwise stated.

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## **Recommendation concepts**

*Our recommendations are based on market developments and an assessment of the expected return. A positive recommendation (BUY) is based on expectations that investment in the corporate bond will generate a return above that of the general credit market. On the other hand, a negative recommendation (SELL) implies that we expect investment in the corporate bond to generate a return below that of the general credit market.*

*The future and historical returns estimated in the research report are stated as returns before costs since returns after costs depend on a number of factors relating to individual customer relations, custodian charges, volume of trade as well as market-, currency- and product-specific factors.*