VCL Master Sweden S.A., Compartment 1 Swedish Auto Lease ABS

Ratings

Series[1,2]	Rating	Current notional (SEK m)	Maximum issuance amount (SEK m)	Notional (% assets)	CE (% assets)	Coupon	Final maturity
Class A1 to A6	AAA	6,556.6	10,840.3	72.05%	27.95%	1mStibor + 1.00%	September 2032
Class B1	AA-	305.0	400.0	3.35%	17.90%	1mStibor + 1.60%	September 2032
Class B2	AA-	305.0	400.0	3.35%	17.90%	1mStibor + 1.60%	September 2032
Class B3	NR	84.5	110.0	0.93%	17.90%	1mStibor + 1.60%	September 2032
Class B4	AA-	220.0	350.0	2.42%	17.90%	1mStibor + 1.60%	September 2032
Subordinated loan	NR	1,456.0		16.00%	190%	1mStibor + margin	September 2032
OC	NR	172.9		1.90%			

Scope's analysis is based on the portfolio dated 28 February 2023 provided by the originator. Scope's Structured Finance Ratings constitute an opinion about relative credit risks and reflect the expected loss associated with the payments contractually promised by an instrument on a particular payment date or by its legal maturity. See Scope's website for the SF Rating Definitions

Transaction details

Purpose	Liquidity/funding
Issuer/participant	VCL Master Sweden S.A.
Originator/grantor, subordinated loan provider/ servicer	Volkswagen Finans Sverige AB (VFS)
Arranger/account bank/cash administrator/interest determination agent/registrar/calculation agent/note purchaser	Skandinaviska Enskilda Banken AB
Security trustee	Oversea FS B.V.
Corporate services provider	CIRCUMFERENCE FS (LUXEMBOURG) S.A.
Closing date	27 March 2023
Payment frequency	Monthly, 25th of each month, the first payment date will be on the 25th of April 2023

The transaction is a 12-month revolving securitisation of a portfolio of financial and operating leases (including the residual value component) closed in the context of a new securitisation programme. VCL Master Sweden S.A. through its Compartment 1 sub-participated in a portfolio of leases originated by Volkswagen Finans Sverige AB and extended to Swedish consumer and corporate lessees. VFS granted to the issuer a subordinated loan that was used to pay part of the receivables purchase price and fund the initial liquidity reserve.

At the portfolio cut-off date, the notes are backed by a SEK 9,100m portfolio composed of operating leases (61.2%) and financial leases (38.8%). The current portfolio is highly granular and has a weighted average seasoning of 1.3 years. Our analysis is based on the portfolio as of the initial cut-off date (28 February 2023) and on eligibility criteria (a set of representations by the originator). These criteria will also apply to future leases that the issuer will sub-participate in during the revolving period.

The class A and class B notes are floating rate asset backed notes. Further notes of the rated classes can be issued up to the maximum notional amount to allow the issuer to sub-participate in further receivables and related vehicles. In addition, further classes of notes can be issued up to maximum programme amount of SEK 15.0bn.

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Related Research

Consumer and Auto ABS Rating Methodology

Methodology for Counterparty Risk in Structured Finance

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[1] Payments of both interest and principal under Class A notes are pari passu and pro rata between each notes.
[2] Payments of both interest and principal under Class B notes are pari passu and pro rata between each notes.

Rating rationale (summary)

The rating reflects: i) the expected performance of the underlying portfolio of leases; ii) the quality of collateral; iii) the residual value exposure to movable assets in the context of macroeconomic conditions in Sweden; iv) the legal and financial structure of the transaction; and v) the key transaction counterparties.

Compartment 1 can issue further class A and class B notes up to the maximum amount if funds are needed to sub-participate in further auto lease receivables. In addition, the programme documents allow for the issuance of further classes of notes up to the Compartment 1 maximum amount equal to SEK 15.0bn. The ratings are related to the current note issued up to the maximum amount.

The class A notes are supported at closing by 27.95% of credit enhancement, provided by the subordination of class B notes, the subordinated loan and overcollateralisation. Class B is supported by 17.90% of credit enhancement provided by the subordinated loan and overcollateralisation.

During the revolving period, the issuer may use funds available after paying senior costs, class A and B interest and replenishing the liquidity reserve to sub-participate in further auto lease receivables, subject to eligibility criteria and the performance ratio set out in transaction documents.

The transaction envisages that if certain overcollateralisation targets and performance triggers are met, the remaining funds can be diverted to the payment of the subordinated loans' interest and principal[3] both during and after the revolving period.

A non-amortising liquidity reserve equal to 1.2% of the initial outstanding balance of the class A and B notes has been funded at closing to provide liquidity to the rated notes.

There is no swap in place since the assets and the notes both pay floating interest rates.

[3] If the subordinated loan reaches the minimum required amount than funds will be diverted to VFS as success fees.

Rating drivers and mitigants

Positive rating drivers

Established originator. The originator has been active in the leasing market since 2014 and earlier in car loans financing. Its business benefits from seasoned processes, experienced staff and a granular marketing network.

Solid macroeconomic environment. VFS operates in the Kingdom of Sweden (AAA sovereign rating by Scope), which has a wealthy and diversified economy, a robust fiscal framework, low public debt and consistent current account surpluses.

Overcollateralisation. The class A and B notes respectively benefit from 27.95% and 17.90% of overcollateralisation at closing. During and after the revolving period, overcollateralisation for both classes must increase before remaining funds can be released to the subordinated loan and the originator.

Granular portfolio. The portfolio is granular, the top one, 10 and 100 lessees represent respectively 0.11%, 0.56% and 2.58% of the portfolio. The largest industry concentration, construction, accounts for 11.50%.

Negative rating drivers and mitigants

Residual value risk. Residual values on the operating leases may constitute up to 50% of the securitisation balance. The transaction is highly exposed to market-value risk on the operating leases and to indirect market-value value risk on the security of defaulted receivables for both the operating and the financial leases.

Payments junior to rated notes. If class A and B overcollateralisation targets are met, funds can be diverted to the most junior item of the waterfall unless certain performance triggers are hit. However, triggers linked to portfolio performance ratios (delinquencies and defaults) are curable.

Revolving period. The first issuance under the programme envisages a 12-month revolving period, during which the collateral could change its composition at closing. The originator has provided the issuer with a set of representations that limit the lease receivables in which the issuer may sub-participate. Scope’s analysis incorporates these limits.

No transfer of receivables. The issuer is not purchasing the portfolio based on a market-standard true sale but is entering in a sub-participating agreement where the leasing components and the vehicles are pledged towards the payment of a participation fee. In an enforcement scenario, this would bring some uncertainty in recovery timing and increased costs related to the sale of the leasing portfolio. We consider enforcement unlikely based on the credit quality of the originator and its parent company.

Liquidity Risk: The non-amortising liquidity reserve covers approximately two payment dates of senior costs and interest on class A notes with a stressed Stibor 3 months at 6.0%. This coverage is low compared to peer transactions, but it will increase during the life of the transaction, after the end of the revolving period, when the notes start amortising.

Upside rating-change drivers

End of the revolving period. The completion of the revolving period with robust portfolio, originator and sovereign performance could lead to a rating upgrade.

Downside rating-change drivers

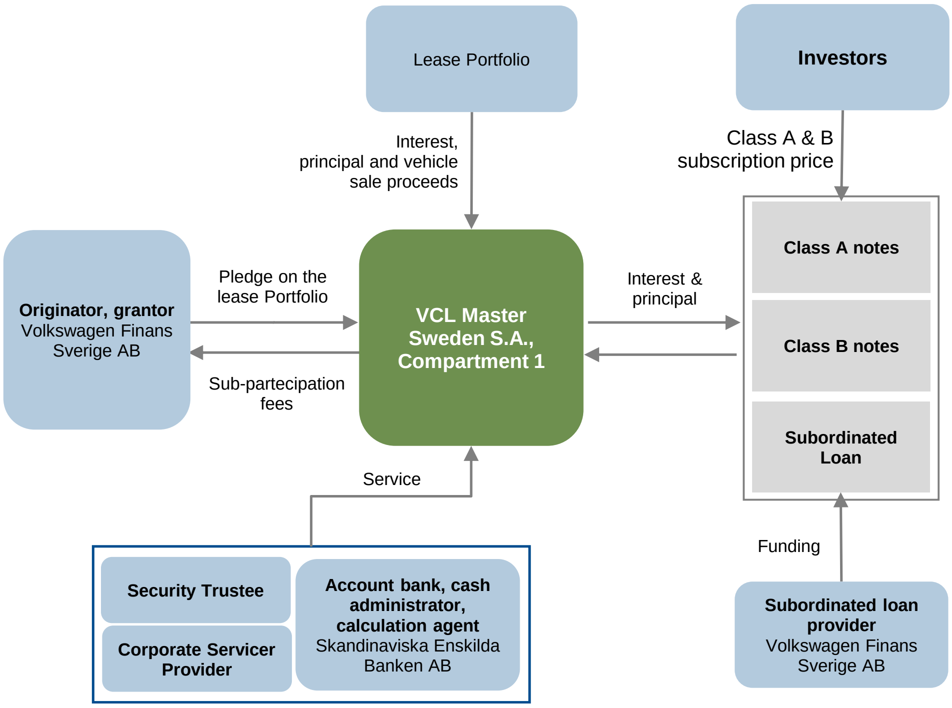
Worse-than-expected asset performance showing in higher-than-expected defaults or lower-than-expected recoveries upon asset default may negatively impact the ratings.

Worse-than-expected underlying vehicle performance. for example, through an economic contraction that facilitates a sharp deterioration in collateral values and dampens vehicle sale proceeds, could negatively impact the rating.

Table of contents

1. Transaction summary

Figure 1: Simplified transaction diagram



Source: Transaction documents and Scope

VCL Master Sweden S.A. has established a SEK 15.0bn securitisation programme of notes backed by auto leases (financial and operating) extended to both corporate and individual lessees in Sweden and originated by VFS. The notes of the current series envisage a revolving period, for which the first series is set at 12 months.

This is the first issuance under the VCL Master Sweden S.A. securitisation programme.

The programme permits the issuance of several series. All the series issued by Compartment 1 will be collateralised by the whole portfolio pledged by VFS in favour of the issuer. Under the transaction documents, the issuance of a new series must meet certain requirements (e.g. liquidity reserve at target, no performance trigger met).

2. Macroeconomic environment

Sweden's economy rebounded quickly from the Covid-19 crisis, growing by 4.8% in 2021 following a contraction of 2.8% in 2020. By early-2021, economic output reached pre-pandemic levels on the back of strong private consumption, recovering investments and contact-related services. The strong growth momentum continued during the first half of 2022 but has since slowed significantly due to the fallout from the Russia-Ukraine war as wider inflationary pressures and the close interconnection with European electricity markets caused energy prices to surge. This has resulted in increasingly tighter financial conditions, a sharp slowdown in the housing market and falling real incomes. While economic output still increased by 2.8% in 2022, we expect a contraction in GDP of 1.0% in 2023.

Inflation has been increasing rapidly since mid-2021, rising from 1.4% in July 2021 to 12.0% in February 2023. The inflation rate increased in February despite falling energy prices. Core inflation remained exceptionally high at 9.3%, well above the Riksbank's target of 2%. Inflation is expected to fall quickly in 2023, although upside risks remain of a slower decline. The Riksbank's Executive Board raised the policy rate by half a percentage point to 3.00% in February and signalled further rate hikes this year. In addition, the Riksbank ceased asset purchases at the end of 2022 and will start to sell government bonds from April 2023 onwards. Asset holdings have started to decline and currently amount to just over SEK 844.2bn as of January 2023.

Labour markets remain resilient despite the slowing economic growth. The employment rate continues to be well above the pre-pandemic level, standing at 69.1% in February 2023, while the unemployment rate of 7.6% in February 2023 is only marginally above the pre-pandemic level of 7.4% in January 2020. Wage growth has been muted so far and the unions have called for below-inflation wage increases, reflecting the challenging economic environment. With little risk of a wage-price spiral, we expect the unemployment rate to average 8% in 2023, up from 7.5% in 2022.

The strength and resilience of Sweden's public finances enabled the government to adopt effective fiscal measures during the Covid-19 pandemic and the ongoing energy crisis. Since September 2021, the government allocated EUR 6.8bn (1.3% of GDP) to shield households and firms from the energy crisis in addition to a EUR 23bn (4.4% of GDP) emergency backstop for utilities. We expect budget deficits of around 1.0% of GDP in 2023 and 0.8% of GDP in 2024 reflecting lower tax income and higher central government spending in light of the economic slowdown. In addition to automatic stabilisers resulting in higher budget deficits, the 2023 budget includes planned spending on a temporarily reduced tax on gasoline and diesel, increased government grants to municipalities and regions, additional labour market support, and defence initiatives. The approximately SEK 40bn of unfunded measures announced in the 2023 budget is expected to lead to an increase in bond issuance this year. However, in aggregate, we do not expect a significantly expansionary fiscal policy as the government attempts to avoid fuelling inflationary pressures.

Sweden has been running consistent, albeit declining, current account surpluses for the past two decades. The current account surplus widened to 5.9% of GDP in 2020, but preliminary estimates for 2022 indicate a decline to 3.8%. This is mainly driven by a lower net export of goods including merchandise, manufactured goods and minerals, and high imports of services, including a post-pandemic recovery in travel and other business services. The IMF projects that the current account balance will stabilise at around 3-3.5% of GDP in the medium term.

Systemic risks are now elevated but remain manageable. Banks' healthy capital levels could come under pressure if a very large macro-financial shock crystalises. Real estate prices in some regions are expected to fall by around 20%, reflecting a broad market correction in response to rapidly rising interest rates. In February 2023, house and apartment prices remain around 17% and 10% below their peaks. The high level of private debt in combination with typically short rate fixation leads to a high sensitivity to interest rates. Sweden's interconnected financial system can also lead to an amplification if a severe macro financial shock were to materialise. Large banks tend to finance mortgage loans by issuing covered bonds which are held by insurance companies, pension funds and other banks.

3. Originator and seller

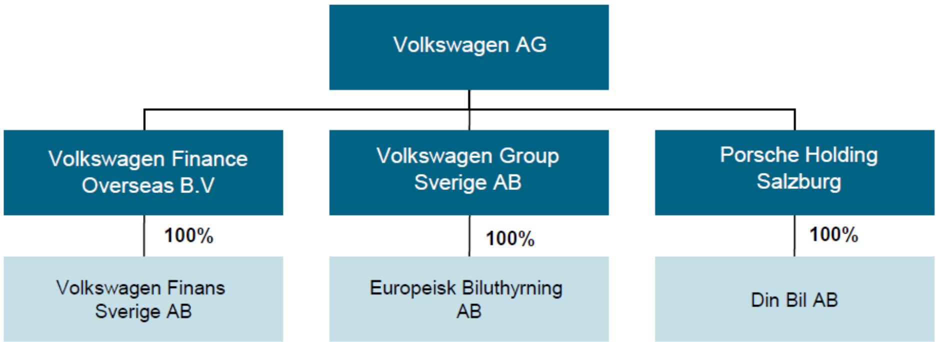
Volkswagen Group market share in Sweden is 25.4% (2021)

VFS is a financial institution wholly owned by Volkswagen Financial Services AG[4] (see Figure 2). Volkswagen Financial Services AG provides financing services for consumer and corporate lessees in Sweden.

[4] VFS is a business division of the Volkswagen AG group of companies and comprises Volkswagen Financial Services AG along with its associated companies, Volkswagen Bank GmbH, Porsche Financial Services, and the financial services companies in the USA and Canada that belong directly or indirectly to Volkswagen AG – with the exception of the financial services of the Scania brand and Porsche Holding Salzburg.

The VFS group includes: i) Volkswagen Group Sverige AB, Sweden's largest car importer, which markets the cars of the Volkswagen group brand; and ii) Din Bil AB, Sweden's largest dealer organisation authorised for the Volkswagen group's car brands.

Figure 2: VFS group structure



Source VFS

VFS's distribution model comprises Volkswagen group dealers that are both associated and not associated. Distribution covers almost 90% of dealers selling Volkswagen group vehicles. VFS offers financing and leasing services to individual and corporate customers in addition to products like insurance (e.g. motor, warranty and payment), other services (e.g. management and administration of car fleets; staff cars) and maintenance. These services are typically linked to the leasing products rather than the financing products and are provided only for Volkswagen group brands (Volkswagen, Audi, Skoda, Seat, Cupra, Transportbilar and Porsche). VFS also provides financing for corporate fleets but this product is not part of the securitisation programme.

Leasing accounts for almost 44% of total financing volume in 2021

Leasing accounts for almost 44% of total financing volume in 2021, which is expected to grow for the retail component due to the market's transition from owning vehicles to using mobility services. Corporate customers especially prefer leasing contracts to direct car purchases for tax reasons.

As of 31 December 2021, VFS has 252 employees, total assets of SEK 46.6bn and 233,551 outstanding contracts.

3.1. Underwriting process and products

The credit approval process is highly automated, aided by the dealers and the IT system. The aim is to facilitate quick decisions and disbursements, which is possible as most of the approvals are automated (up to SEK 3m).

Credit approval is highly automated.

VFS has two credit-scoring systems: one for consumers and sole traders; the other for commercial customers. The originator's credit scoring systems use both internal and external information. The scorecards are similar in design and consist of five modules built on variables that depend on scorecard. Both quantitative and qualitative aspects are validated; risk management review and approve all active scorecards every year.

There are three scoring results: i) approved; ii) rejected; and iii) for manual control, where the credit agent has to review the application. The approval rate has been stable for the past few years.

For lease applications from the dealer, the dealer collects and inputs information from the lessees and passes the application to the originator. The dealer receives a credit score from the system. After the agreement is signed, the dealer sends the documents to VFS's operating agents, who validate that the information matches with the approved application. The operating agent activates the contract once all requirements are met.

VFS offers six types of leasing products (between operating and financial) to individual and corporates with a maximum maturity of 60 months. Terms can be extended by up to 6-7 years depending on the product (e.g. only 10 years for financial leases to corporates). The credit manager must approve any extension over the predefined term. Customers can apply to terminate the lease early, which would be subject to a penalty payment.

3.2. Servicing and recovery

VFS is the transaction's servicer. VFS's management of collections and non-performing leases is adequate as it is proactive and diligent.

An internal credit department manages the recovery process with the support of an external company, Svea Inkasso. VFS started to utilise Svea Inkasso in 2000, so the process is well established, which can be considered as a strength. Three external companies are contracted to perform the car repossessions.

When an instalment is missed, the credit department sends a payment reminder within 10 days. A notice of termination is sent 25 days after the first missed instalment; a demand of injunction (or repossession) is issued after a further 10 days. The credit department then seeks to find an arrangement or agreement with the lessee to avoid repossession; this process usually takes place three months from the date of the first unpaid instalment. If no agreement is reached, the repossession agency receives the information to start repossession. The lessee can still make the payment at this point; otherwise the repossession takes place. On average, remarketing takes place 30 days after repossession.

Following repossession, legal measures are also taken for any remaining claims.

4. Portfolio analysis

The securitised portfolio (and further sub-participations) is a granular pool of auto leases (operating and financial) granted to Swedish individuals or corporates. Up to 50% of the outstanding portfolio may be composed of the residual value of operating leases, which is based on mileage and contractual terms and subject to adjustment and deviation.

4.1. Eligibility criteria (originator representations)

As of the initial cut-off date for the current portfolio and for the following cut-off of the further sub-participated lease, the originator has specified representations in the transaction documents, of which among the others:

(i) All lease receivables are denominated in SEK;
(ii) All lease receivables and vehicles are free of pledges, restrictions on pledges, rights of third parties or encumbrances;
(iii) All lease receivables are current;
(iv) All lease receivables are governed by Swedish law and are not terminated;
(v) At least one instalment has been paid;
(vi) The original lease maturity is not exceeding 60 months, the total length of the lease is less than 78 months and the expiration date is not earlier than 6 months;
(vii) All lease pays monthly instalments;
(viii) The top lessee makes up 0.2% of the portfolio's outstanding balance;
(ix) The margin over the VFS base rate is at least 0% and the portfolio's weighted average margin is at least 2.6%;
(x) The lessee is not an affiliate of VFS;
(xi) The lessee has no deposit on an account with VFS;
(xii) More than 90% of the vehicles are from the Volkswagen group;
(xiii) More than 80% of the leases are on new vehicles;

(xiv) The total estimated residual value (RV) does not exceed 50% of the portfolio's outstanding balance; and

(xv) No lease receivables are internally categorised by VFS as 'fleet';

(xvi) more than 90% of the Leased Vehicles are Volkswagen, Audi, SEAT, Skoda, Porsche, Lamborghini or Volkswagen Nutzfahrzeuge.

4.2. Initial portfolio summary

The SEK 9,100m portfolio as of 28 February 2023 comprises 41,165 lease receivables extended to individuals (52.42%) and corporates (47.58%). Compared to VFS's total loan book, the portfolio benefits from positive selection as eligibility criteria exclude, among other things, exposures that have more than two instalments due and unpaid.

The portfolio is composed of operating leases (61.18% - including the estimated residual value) and of financial leases (38.82% - including the final instalment component)

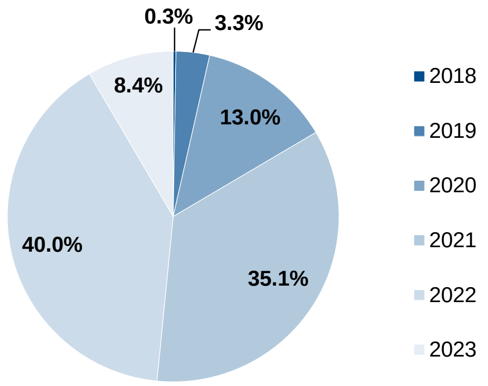
Figure 2: Portfolio stratification table

Portfolio summary (in SEK)	
Number of lease contracts	41,165
Number of lessees	36,896
Original portfolio balance	12,702,766,733
Current portfolio balance	9,099,999,755
Average balance	221,062
Average residual value	162,403
Top one lessee	0.11%
Top 10 lessees	0.56%
Top 20 lessees	0.88%
Weighted average interest rate	6.82%
Weighted average margin	3.35%
Weighted average original term	3.01
Weighted average seasoning	1.334
Weighted average remaining term	1.78
New vehicles	88.63%
Old vehicles	11.37%
Consumer	52.42%
Corporate	47.58%
Volkswagen group	96.44%
Financial leases	38.82%
Operating leases	61.18%
Passenger cars	87.48%
Light commercial vehicles	12.52%
Current balance breakdown (amounts are in SEK)	**Percentage of total**
Instalment component	26.53%
Residual value, operating leases	47.66%
Final instalment, financial leases	25.80%

Source: VFS

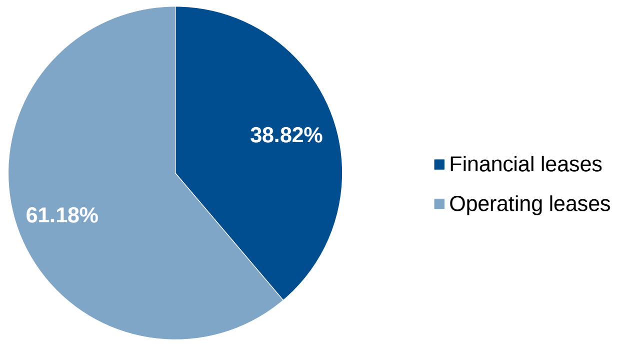
The current lease portfolio is composed of leases originated between 2018 and 2023. For around 75.37% of the current balance, however, leases were originated in the last three years. The portfolio weighted average seasoning is 1.33 years and the weighted average remaining term to maturity is 1.78 years. Leases added to the portfolio have had at least one instalment paid and are all current.

Figure 3: Distribution by lease origination year, % of outstanding balance



Source: VFS, Scope

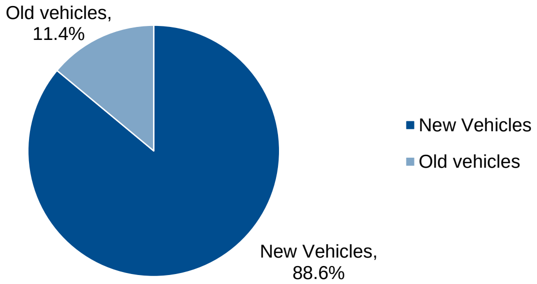
Figure 4: Distribution by type of lease, % of outstanding balance



Source: VFS, Scope

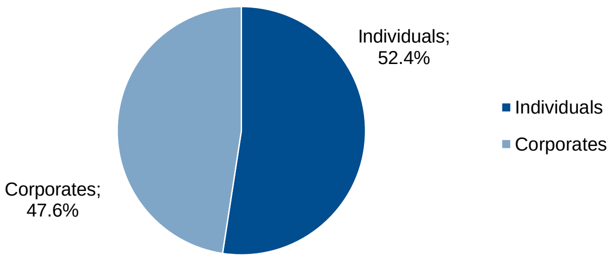
All leases in the pool are amortising and pay monthly instalments at a weighted average margin over the VFS base rate of 3.35%.

Figure 5: Distribution by vehicle type, % of outstanding balance



Source: VFS, Scope

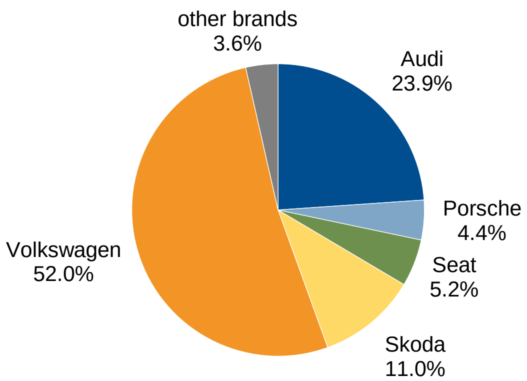
Figure 6: Distribution by lessee type, % of outstanding balance



Source: VFS, Scope

The lease receivables in the current portfolio were originated with Volkswagen group vehicles. Of the outstanding balance, Volkswagen group vehicles account for around 96.44%. New and used vehicles account for 88.63% and 11.37%, respectively. We have received monthly historical gross and net loss data from VFS. Our analysis incorporates the risk related to the change in composition from the current portfolio due to the portfolio's revolving nature and accounts for a higher proportion of used vehicles and non-Volkswagen group vehicles, in line with eligibility criteria.

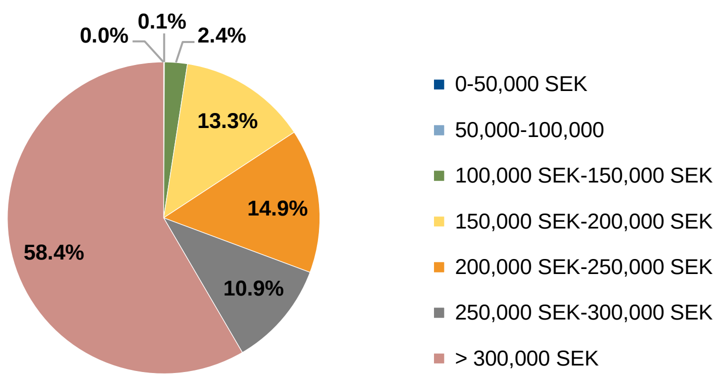
Figure 7: Distribution by vehicle brand, % of the outstanding balance



Source: VFS, Scope

The pool is highly granular with the top one, 10 and 100 lessees accounting for 0.11%, 0.56% and 2.58%, respectively. The maximum original lease balance in the portfolio is SEK 2.2m but 98.99% of the current balance consists of leases with an original balance of less than SEK 1m. The maximum current lessee exposure is SEK 10m but the current balance towards lessee with an exposure lower than SEK 1m is 93.80%.

Figure 8: Distribution by original lease size, % of the outstanding balance



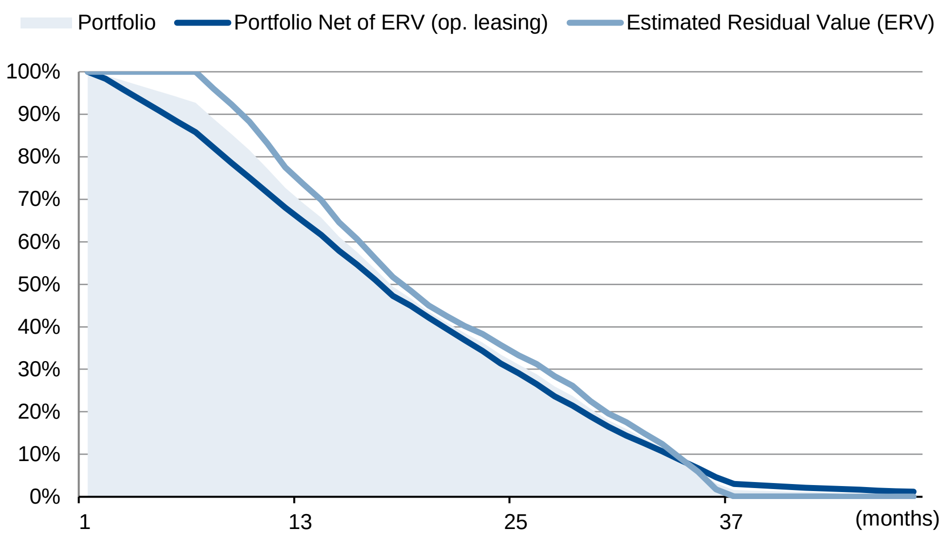
Source: VFS, Scope

4.3. Amortisation profile

Amortisation profile may be extended due to the revolving period and the permitted extension.

The projected amortisation profile reflects the amortisation schemes of the underlying assets. Figure 9 shows the amortisation of the initial portfolio assuming zero prepayments and defaults. However, amortisation could be extended if: i) during the revolving period, the new lease sub-participation is less seasoned compared to the current weighted average portfolio seasoning, considering that the portfolio criteria allow the lease terms to reach 60 months; and ii) the maturity of the lease can be extended. On the other hand, the amortisation could accelerate due to prepayment of the leases.

Figure 9: Projected portfolio amortisation profile (zero prepayments and zero defaults)



Source: VFS, Scope

5. Asset analysis

We derived default rate and recovery rate assumptions based on gross and net loss vintage data provided by VFS from its own lease book (Jan 2015 to Dec 2022). This information is representative of the securitised portfolio and segmented by lessee type (individual or corporate), lease type (operating or financial) and vehicle type underlying the lease contract (new or used). These details are shown in Appendix I.

Our analysis of defaults accounts for how the portfolio may change during the 12-month revolving period, incorporating portfolio criteria for the sub-participation of further assets. We derived the mean default rate based on the worst-case portfolio composition by lessee, product and vehicle types taking into account the portfolio's amortisation profile during the revolving period and assuming certain prepayment levels.

Figure 10: Portfolio assumptions

	Portfolio
Mean default rate	3.2%
Coefficient of variation	40.0%
Base case default recovery rate	80.0%
Base case residual value recovery rate	80.0%
AAA rating-conditional default recovery rate	48.0%
AAA rating-conditional residual value recovery rate	63.0%
Recovery timing	12 months for defaults and four months for a regular car repossession and sale
Low constant prepayment rate	0.0%
High constant prepayment rate	20.0%
Portfolio weighted-average yield	2.8% reducing linearly to 2.3% over 36 months

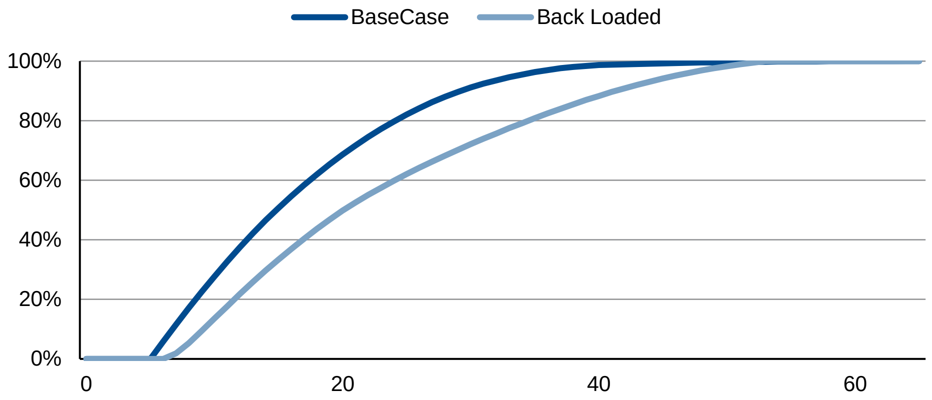
5.1. Portfolio default distribution

We assumed an inverse Gaussian default distribution, with a mean default rate of 3.2% and a coefficient of variation of 40%. In the transaction, a default occurs if either: i) a lease is more than 150 days' delinquent; or ii) a lease is declared defaulted by the servicer.

The structure is sensitive to backloaded default timing.

Our analysis considered a constant default intensity speed (defaults start after six months) that follows the portfolio's amortisation in line with the approach detailed in our Consumer and Auto ABS Rating Methodology. We also tested a back-loaded default term structure. The structure is sensitive to a back-loaded timing because until defaults starts materialising and the sequential trigger is hit, the structure allows funds to be diverted to the subordinated loan provider. The cumulative default-timing assumptions are shown in Figure 11. Mean default rate and default-timing assumptions do not incorporate adjustments reflecting current seasoning and the pool's amortisation given the portfolio's revolving nature.

Figure 11: Cumulative default-timing assumption



Source: Scope

5.2. Lease recovery rate

We calculated the base case recovery rate assumptions from historical data and then applied a rating-dependent haircut to derive a recovery rate for each rating level, as shown in Figure 12.

Figure 12: Rating-conditional recovery rate assumptions

B	BB	BBB	A	AA	AAA
80.0%	73.6%	67.2%	60.8%	54.4%	48.0%

Source: Scope

Recoveries have been extrapolated from net loss data.

We extrapolated recoveries using cumulative gross and net loss data, adjusting for a certain cushion that accounts for the risk of overestimating recoveries (e.g. netting of recoveries and new gross losses in the same period).

The portfolio's recovery timing was derived based on the servicer collection process and a cushion for a longer repossession and sales process. We assumed it will take up to 12 months to repossess a vehicle, sell it on the open market and collect recoveries. When the vehicle is sold after the natural end of the contract, we assumed a shorter time in which the issuer receives the money following the vehicle's sale.

5.3. Residual value assumptions

The portfolio is highly exposed to residual value risk: up to 50% of the portfolio's outstanding balance could be composed of the estimated residual value of operating leases.

We derived rating-conditional assumptions for the residual value based on the following drivers: monthly vehicle-depreciation rates, sales timing, vehicle remarketing costs, down payments and the portfolio's revolving nature (which causes residual value to change). We determined the potential loss from a vehicle's liquidation by estimating proceeds from used-car sales under a rating-conditional stress. We estimated the vehicle's value by applying a cascaded series of rating-conditional vehicle-value stresses.

Our analysis did not further adjust residual value because VFS's penalty structure is sufficient to cover the higher depreciation risk that comes when a contract is redeemed early.

Further details on how we calculate residual value recovery in auto lease transactions can be found in the Consumer and Auto ABS Rating Methodology.

5.4. Constant prepayment rate

Prepayments were run between 0% and 20% for both rated classes.

We used four constant prepayment rate scenarios over the transaction's life. The prepayment levels assumed for the analysis of class A and class B were between 0% and 20%. In general, the rated notes benefit from a scenario with high prepayments because excess spread is relatively low.

5.5. Excess spread

Excess spread will be available to cure losses keeping the overcollateralisation up to target levels.

Transaction benefits from a 1.9% estimated excess spread.

Available excess spread will depend on several factors including senior fees, the default rate and the prepayment rate. We assumed an initial stressed portfolio weighted average margin of 2.8%, accounting for the change in the portfolio during the revolving period and the minimum margin of 2.6% envisaged in the transaction document. We assumed this margin to reduce over time to 2.3%, assuming around 40% of the highest-yielding leases will either default or prepay during the life of the transaction. This resulted in a portfolio yield compression of 0.9% on the 3.2% original weighted average interest rate of the leases.

Excess spread is estimated at 0.6%-0.1% after deducting liability and senior costs and stressed annual fees of 1.25%.

5.6. Data adequacy

We received a full set of data from VFS. This allowed us to derive our rating assumptions including gross and net loss static data, dynamic prepayments, losses and delinquencies. We also received a limited set of data regarding residual value proceeds on an aggregated basis. VFS did not provide cumulative recovery data or line-by-line residual value data; we therefore had to include a cushion considering this missing information.

6. Financial structure

6.1. Capital structure

The class A and class B issuance proceeds together with the financing provided by the subordinated loan will be used to pay the participation fee for the portfolio (including the estimated residual value) at a discount rate of 1.9% and to fund the liquidity reserve up to the initial target amount (the initial specified cash collateral account balance).

The class A and class B notes can be topped up during the revolving period to the maximum issuance amount to pay an additional participation fee for further lease receivables that the issuer will participate in. To maintain the overcollateralisation ("OC") levels and liquidity reserve target, VFS will increase the size of the subordinated loan proportionally.

Issuer available funds can be used to repay interest and principal on the subordinated loans if overcollateralisation and performance trigger levels are met.

The structure envisages specific OC levels for classes A and B during both the revolving period and the amortisation period that allow funds to be diverted on the repayment of interest and principal of the subordinated loans (Figure 13).

Figure 13: Overcollateralisation levels

	Initial OC	Target OC (revolving period)	Target OC (amortisation period)	OC after credit enhancement increase condition (CEIC)
Class A	27.95%	27.95%	31.95%	100.00%
Class B	17.90%	17.90%	21.90%	100.00%

6.2. Priority of payments

Combined priority of payments is the main protection against payment interruption, along with the liquidity reserve.

The structure features a single priority of payments under which principal collections from the assets can be used to cover any interest shortfall on the notes, reducing the risk of a missed interest payment. Figure 14 below details the transaction's pre-enforcement priority of payments.

Figure 14: Simplified priority of payments and available funds

Pre-enforcement priority of payments
Available funds Collections and recoveries from the lease receivables, interest on the accounts, prepayment penalties, proceeds from vehicle sales
1) Taxes, 2) Security trustee fees 3) Servicing fees (1% of outstanding portfolio balance yearly) 4) Senior fees to the transaction parties 5) Class A interest 6) Class B interest 7) Replenish liquidity reserve to required balance 8) Class A principal up to target OC 9) Class B principal up to target OC 10) Interest to subordinated loan 11) Principal to subordinated loan 12) Remaining excess to be paid to VFS

Source: Transaction documents and Scope

6.3. Principal repayment and credit enhancement increase condition ("CEIC")

The principal of class A notes is repaid senior to the principal of the class B notes and the subordinated loan principal until the class A target OC is reached (see Figure 13). After that, the principal of the class B notes can be repaid until its target OC is reached. Once both the target OC levels are reached, the issuer available funds can be used to repay interest and principal of the subordinated loans in accordance with the priority of payments and subject to the maintenance of class A and class B OC targets.

If certain conditions are met (e.g. the CEICs), the issuer available funds after payment of items 1-7 in the waterfall will be used to repay in full the class A notes then the class B notes. The CEICs are:

i. default trigger ratio[5] greater than 0.40%
ii. delinquency trigger ratio[6] greater than 2.00%
iii. servicer termination
iv. VFS insolvency
v. Liquidity reserve not at target for three consecutive payment dates or is lower than 0.80% of the outstanding class A and B notes balance.

6.4. Revolving period

During the 12-month revolving period, the issuer available funds after payment of items 1-7 on the priority of payment will be deposited into the issuer accumulation account, subject to transaction eligibility criteria and early amortisation events (EAE) and could be reinvested into new sub-participated assets. The issuer will pay sub-participation fees using funds on the accumulation account or through the notes' tap-up until the maximum issuance amount is reached. The new receivables will be sub-participated applying an overcollateralisation of 2.89%.

The revolving period will end if one the following EAEs occur:

i. the cash accumulated into the issuer accumulation account exceed 10% of the aggregated pool balance during a maximum of two consecutive months.
ii. the issuer is insolvent.
iii. a missed payment of interest on the most senior class of notes outstanding is not cured within five business days.
iv. one of the CEICs has occurred.
v. after six months since the closing date, the class A and class B OC are lower than 27.50% and 17.50%, respectively.
vi. VFS ceases to be, directly or indirectly, a wholly owned subsidiary of Volkswagen AG

We have assessed the potential negative carry due to the cash standing on the account (item i. above) and consider the risk mitigated by the available excess spread and ultimately by the liquidity reserve.

6.5. Liquidity reserve

Fully funded non amortising liquidity reserves equal to 1.2% of initial balance of class A and B notes.

A liquidity reserve is funded at closing with part of the financing of the subordinated loan.

The liquidity reserve is equal to 1.2% of the initial class A and class B balance (SEK 89.6m). During the transaction's life, the liquidity reserve target is equal to the minimum between (i) the reserve initial balance and (ii) the outstanding notes' balance.

The liquidity reserve will provide protection to the structure in case of a shortfall on the class A and class B interest payments and on items 1-4 of the simplified waterfall (senior items). Any excess amounts above the target level will be released first to the subordinated lender and second to VFS following the dedicated waterfall, as long as no CEIC is in effect. On the notes' final legal maturity, the balance of the liquidity reserve can be used to repay the rated notes' residual principal.

[5] The default trigger ratio is determined as the average of the ratio between defaulted receivables and the outstanding receivables of the last three collection period, where a defaulted receivables is a receivables which is 150 days overdue or which has been declared defaulted by VFS.
[6] The delinquencies trigger ratio is determined as the ratio between delinquent receivables and the outstanding receivables, where a delinquent receivables is a receivables which is more than 4 days overdue and less than 150 days and is not a defaulted receivables.

6.6. Provisioning

The build-up OC mechanism, the CEICs and the sequential amortisation protect the senior noteholders in times of stress.

The transaction structure benefits from an implicit principal-deficiency ledger mechanism since the notes amortise up to an OC level. The target amortisation amount is calculated on each payment date as the difference between the notes' outstanding amount and the outstanding collateral portfolio reduced by the written off leases. Therefore, the excess spread can be used to cover losses before being distributed to the subordinated loan provider.

6.7. Interest rate risk and hedging

6.7.1. Interest rate risk

Interest rate risk is limited.

Interest rate risk is limited because the class A and B notes pay one-month Stibor plus a margin and all leases in the portfolio pay the VFS base rate, a standard variable rate (see section 6.7.2) plus a margin.

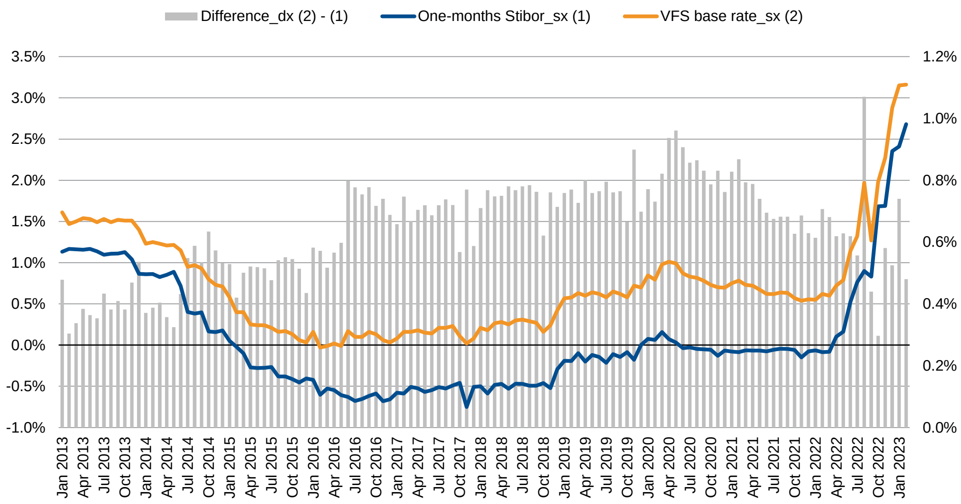
We addressed interest rate risk by applying a stress over the forward one-month Stibor curve when modelling assets and liabilities.

6.7.2. Basis risk

The structure is unhedged from basis risk that could arise between the assets and liabilities.

The VFS base rate is a standard variable rate used to price VFS's products. This rate is published on VFS's website. We have been provided with historical data on the VFS base rate back to 2013 (see Figure 15).

Figure 15: One-month Stibor and VFS base rate



Source: VFS, SFBF, Scope

Basis risk is limited since VFS sets its base rate monthly by referencing three-month Stibor (plus a certain margin as showed in Figure 15) and further mitigated by the fact that three-month Stibor historically often has been higher than the one-month Stibor.

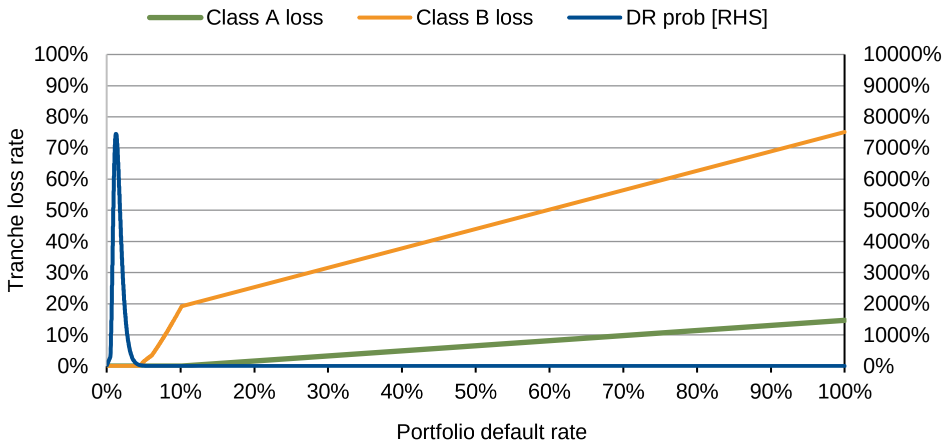
6.8. Quantitative analysis

We used a bespoke cash flow analysis.

Our cash flow analysis considered the portfolio's characteristics and the transaction's main structural features. We applied our large homogenous portfolio approximation approach when analysing the granular collateral pool and projecting cash flows over the amortisation period. The cash flow analysis considers an inverse Gaussian default distribution to calculate the expected loss and the expected weighted average life of each rated tranche.

Figure 16 shows the losses of the class A and class B notes at all portfolio default rates at their respective rating scenario. The chart shows how credit enhancement, recovery and vehicle proceeds and excess spread protect the notes in the event of default.

Figure 16: Cash flow results for base case mean default rate, coefficient of variation and rating-conditional recovery rate



Note: The probabilities displayed on the right-hand side axis must be considered in the context of the calculation of the probability density.

Source: Scope

7. Rating sensitivity

We tested the resilience of the rating against deviations in the main input parameters: the portfolio mean default rate and the portfolio recovery rate. This analysis has the sole purpose of illustrating the sensitivity of the rating to input assumptions and it is not indicative of expected or likely scenarios.

For class A, the following shows how the results change compared to the assigned credit rating in the event of:

- an increase of the expected mean default rate by 50%, zero notches;
- a decrease of the expected recovery rate by 50%, zero notches.

For class B, the following shows how the results change compared to the assigned credit rating in the event of:

- an increase of the expected mean default rate by 50%, one notch;
- a decrease of the expected recovery rate by 50%, minus one notch.

8. Sovereign risk

Sovereign risk does not limit any of the rating.

Sovereign risk does not limit any of the ratings. The risks of an institutional framework meltdown or legal insecurity risk is considered extremely unlikely, especially in the context of the expected life of the rated notes.

8.1. Vehicle market-value risk

Used-vehicle prices are a key performance driver in the transaction because i) the residual-value exposure is up to 50% of the securitisation amounts as per revolving period eligibility criteria; and ii) we expect vehicle prices to depreciate in line with the range detailed in the Consumer and Auto ABS Rating Methodology. Noteholders are also exposed to vehicle values in the event of contractual defaults or early termination (i.e. recoveries given default). We have tested the structure assuming a car market value decline which captures the risk of a severe domestic market drop.

9. Counterparty risk

None of the counterparty exposures constrain the rating achievable by this transaction (Figure 17). Counterparty risk for the transaction supports the highest ratings. We do not consider any of the counterparty exposures to be excessive.

Figure 17: Counterparties

Role	Entity	Documentation Trigger	Scope rating
Originator, grantor, servicer and subordinated loan provider	Volkswagen Finans Sverige AB	n.a	NR
Issuer, participant	VCL Master Sweden S.A.	n.a	NR
Account bank, cash administrator, arranger and lead manager	Skandinaviska Enskilda Banken AB	BBB/S-2	Subscription rating
Security trustee	Oversea FS B.V.	n.a	NR

9.1. Operational risk from servicer

Disruption of servicing function highly unlikely

The operational risk exposure to VFS over the transaction's life is mitigated by the relevance of the Volkswagen group in the Swedish car market and the robust credit quality of the country of operation. The servicer's credit quality assessed based on the rating of its parent company (Volkswagen Financial Services AG) is above the materiality threshold for servicer disruption under Scope's Counterparty Risk Methodology. We consider a disruption of the servicing function to be highly unlikely.

9.2. Commingling risk

VFS as servicer will collect all lease instalments, vehicle realisation proceeds and other collections due under the lease receivables (e.g. prepayment penalties). The issuer does not have a specific account held by the servicer to which lessees can transfer payments. As a result, if the servicer becomes insolvent, the funds that the servicer collects from the pledged portfolio could be commingled with its other funds, even if it is expected that the servicer is keeping those funds in escrow, in accordance with the servicing agreement. This could result in funds not being transferred to the issuer in full and in a timely manner in case of a servicer insolvency.

The issuer has a distribution account held at Skandinaviska Enskilda Banken AB, on which Scope has a private rating. The servicer must deposit collections within two business days from receipt into this account.

Commingling risk is immaterial.

Commingling risk is immaterial due to the short holding period of the funds in the servicer accounts and by the assumed servicer's credit quality based on the rating of its parent company.

9.3. Account bank risk

The transaction documents envisage a replacement mechanism if the account bank's rating falls below a certain threshold. These rating thresholds are in line those in Scope's Counterparty Risk Methodology but the replacement timing is 60 calendar days longer than the time by Scope, which is 30 days. We assessed this risk when modelling the transaction, considering Skandinaviska Enskilda Banken AB's subscription rating, concluding that the risk has currently no impact on the rated notes but there could be a linkage in case the replacement scenario is materialised.

9.4. Set-off risk from originator

Set-off risk from originator mitigated.

Set-off risk is well mitigated in this transaction. The originator is a deposit-taking financial institution, but the eligibility criteria exclude at closing all lessees that have a deposit account with VFS. The eligibility criteria will remain valid for further lease receivables the issuer will sub-participate in during the revolving period.

10. Legal structure

10.1. Legal framework

This securitisation structure does not envisage a true sale of the lease receivables and the related vehicles. It instead envisages a sub-participation agreement between the issuer and VFS regarding the payment of participation fees. The issuer will have the right to sub-participate in certain components[7] of a lease portfolio and VFS will pledge the receivables and the vehicles in favour of the issuer.

The sub-participation of the asset, related pledge, accounts and servicing agreements are governed by Swedish law. The securitisation programme documents are governed by German law. Luxembourg Law governs the issuer documents.

10.2. Use of legal opinion

We reviewed the legal opinions produced for the issuer. These provide comfort on the issuer's legal structure and supports our general legal analytical assumptions.

11. Monitoring

Scope analysts are available to discuss all the details surrounding the rating analysis.

We will monitor this transaction based on the performance reports from the servicer, as well as other available information. The ratings will be monitored on an ongoing basis.

Scope analysts are available to discuss all the details surrounding the rating analysis, the risks to which this transaction is exposed and the ongoing monitoring of the transaction.

12. Applied methodology and data adequacy

For the analysis of this transaction, we applied our General Structured Finance Rating Methodology, Consumer and Auto ABS Rating Methodology and Methodology for Counterparty Risk in Structured Finance, all available on our website, www.scoperatings.com.

VFS provided us with cumulative static gross and net loss data, segmented by monthly vintage of origination, by type of lessee (consumer or corporate), type of lease (operating or financial) and type of underlying vehicles (new or used). The loss data covers a period from January 2015 to April 2022 and is generally very granular. We also received dynamic data on prepayments, delinquencies (divided by buckets) and dynamic losses. However, the data does not include vintage recovery data based on a static amount of default. In addition, residual value information was provided on an aggregate basis (i.e. not on a lease-by-lease or segment basis).

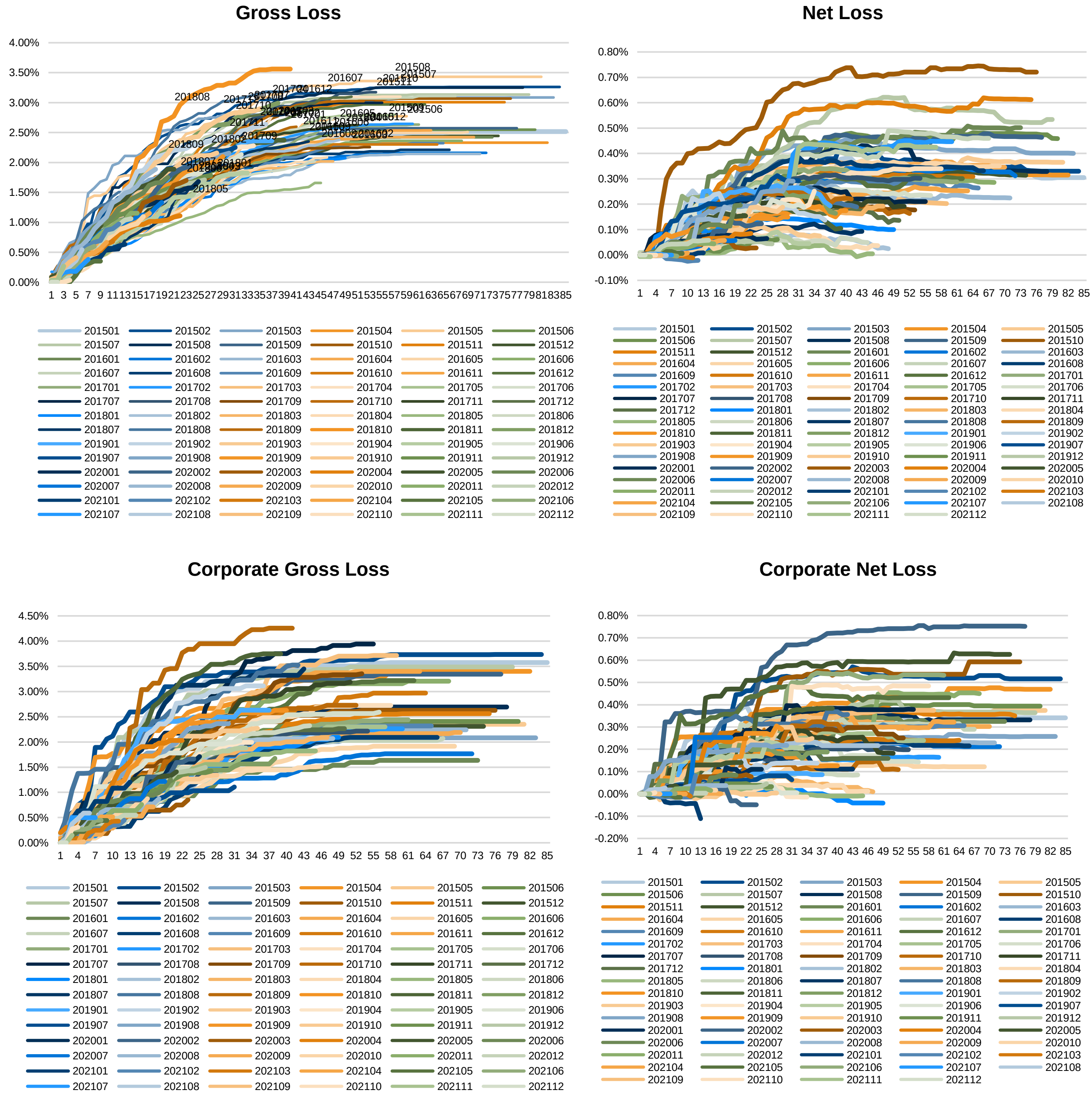
[7] Principal, interest, final instalment of the lease contract and estimated residual value.

I. Vintage data provided by originator

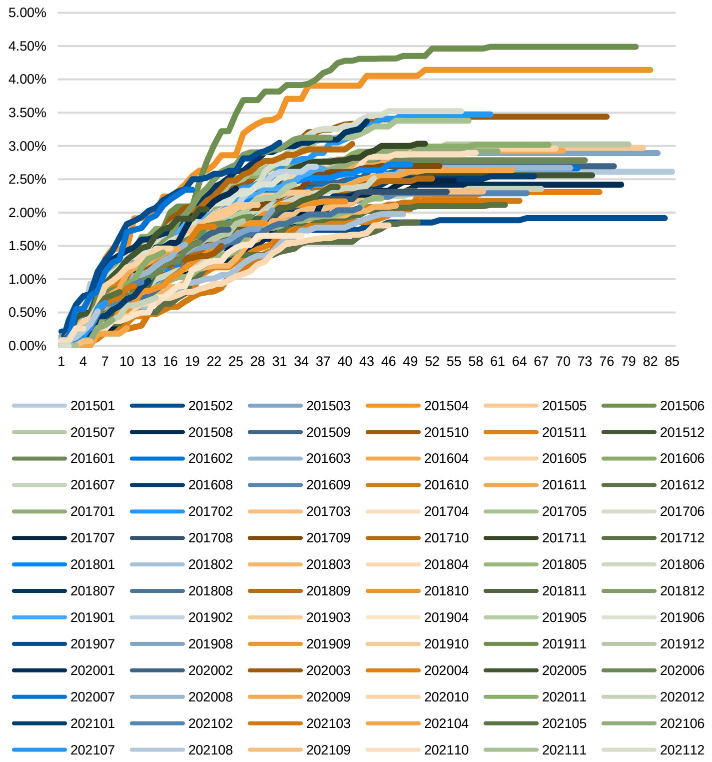
VFS provided gross and net loss vintage data related to its own book after applying certain filters. Some of the filters excluded framework agreements (fleet), heavy vehicles (buses and lorries), lease origination and origination dates before January 2015. We used static data as a foundation for the calibration of point-in-time default rates, the coefficients of variation and base case recovery rates for defaulted leases.

Vintage data is granular and representative of the portfolio. Default data are based on a technical default definition: arrears of over 60 days from when the customer has not paid all outstanding invoices. The definition differs from the transaction default definition where a lease is considered in default after 150 days.

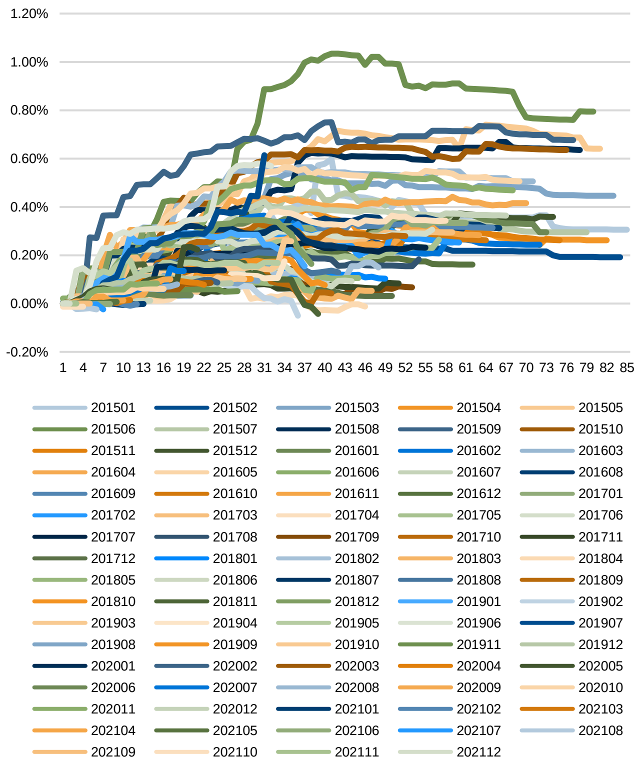
Figure 18: VFS Gross and Net Loss by amount



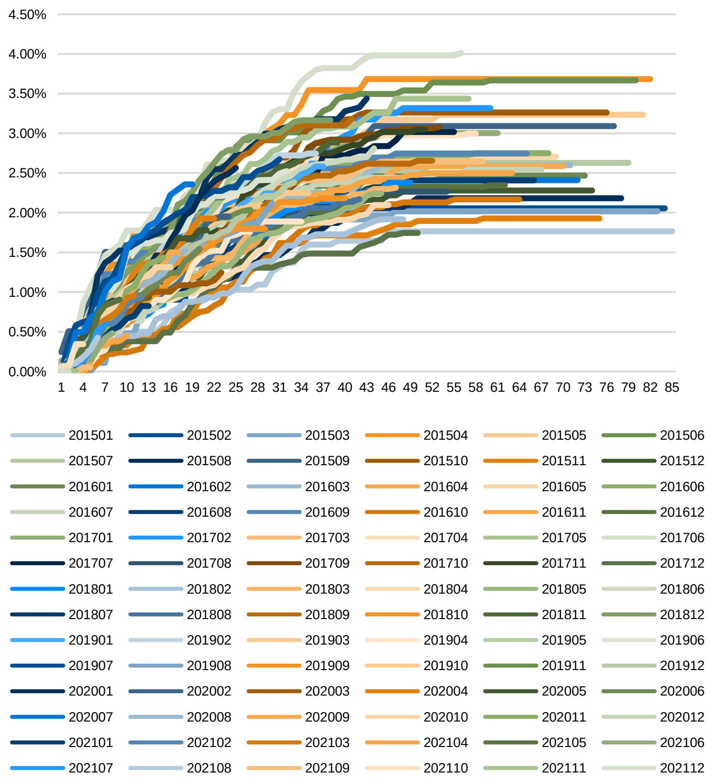
Individual Gross Loss



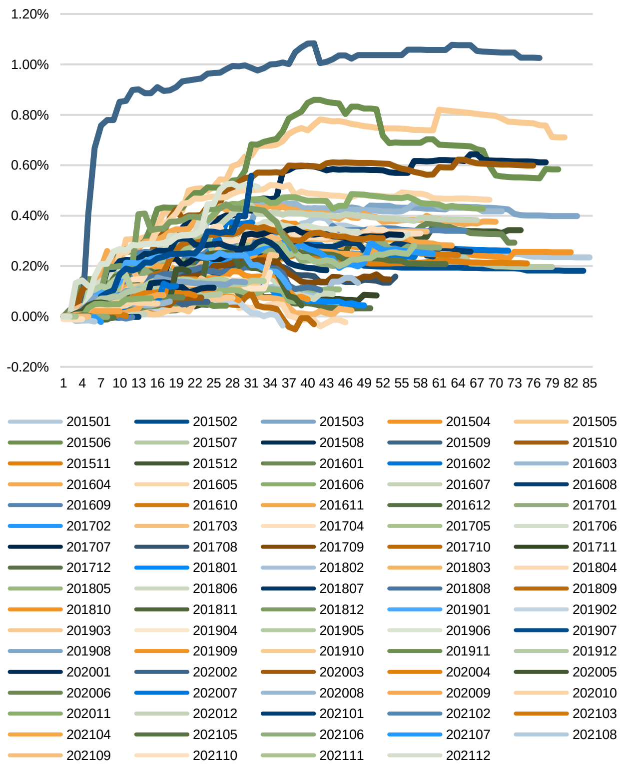
Individual Net Loss



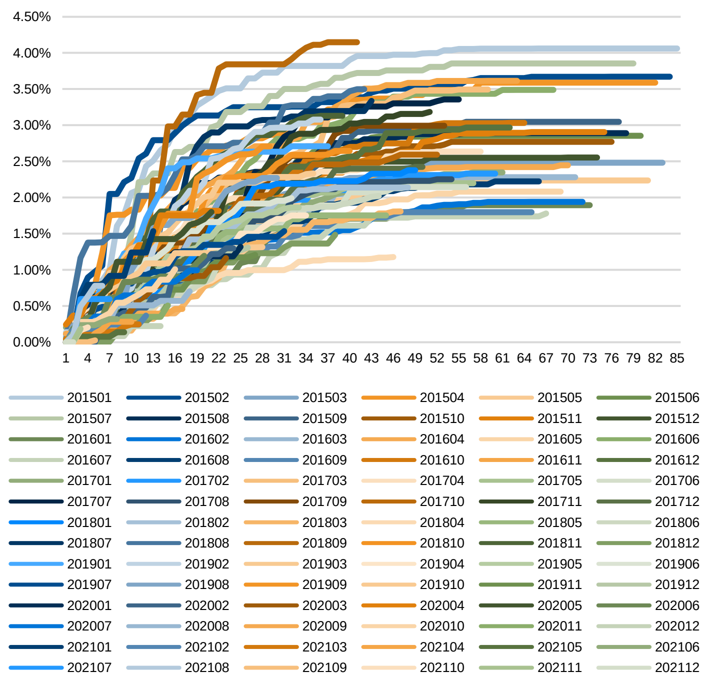
Operating Lease Gross Loss



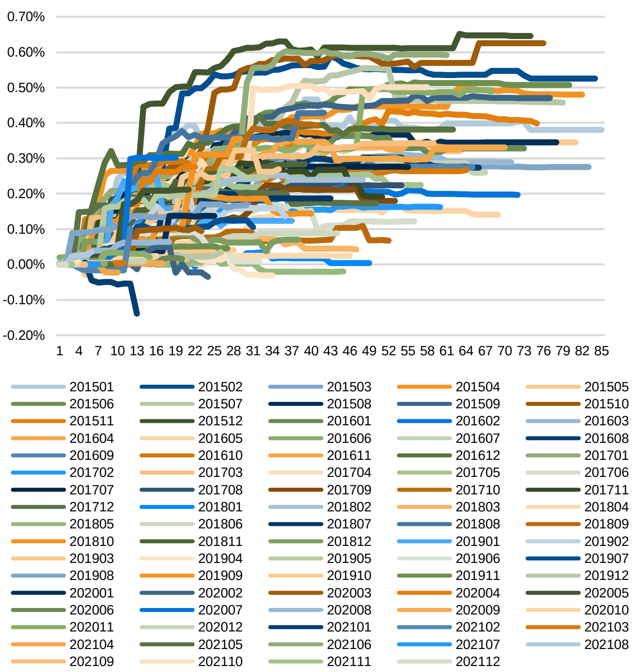
Operating Lease Net Loss



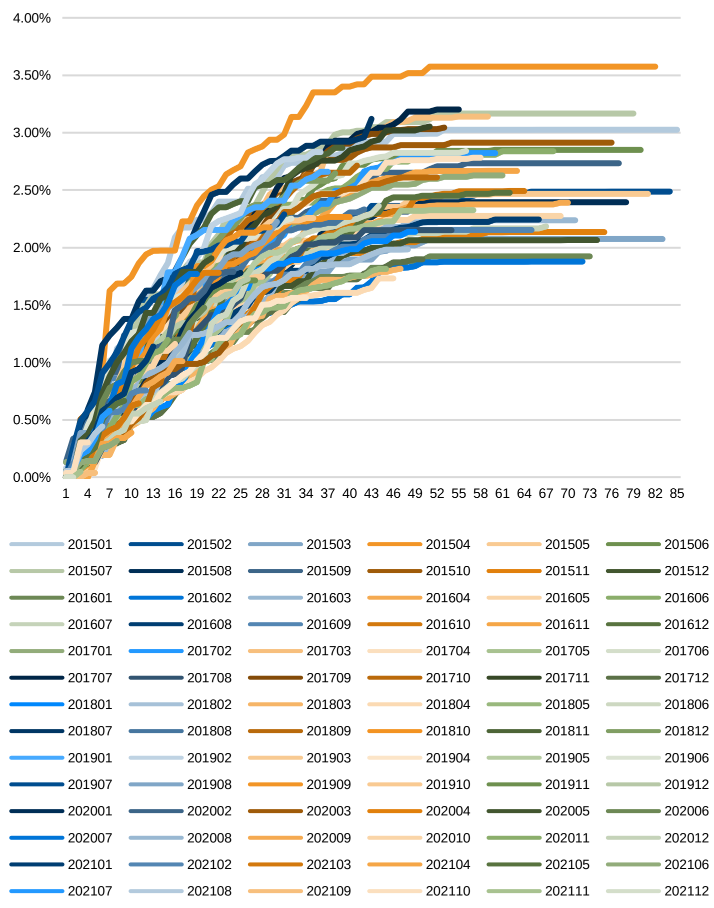
Financial Lease Gross Loss



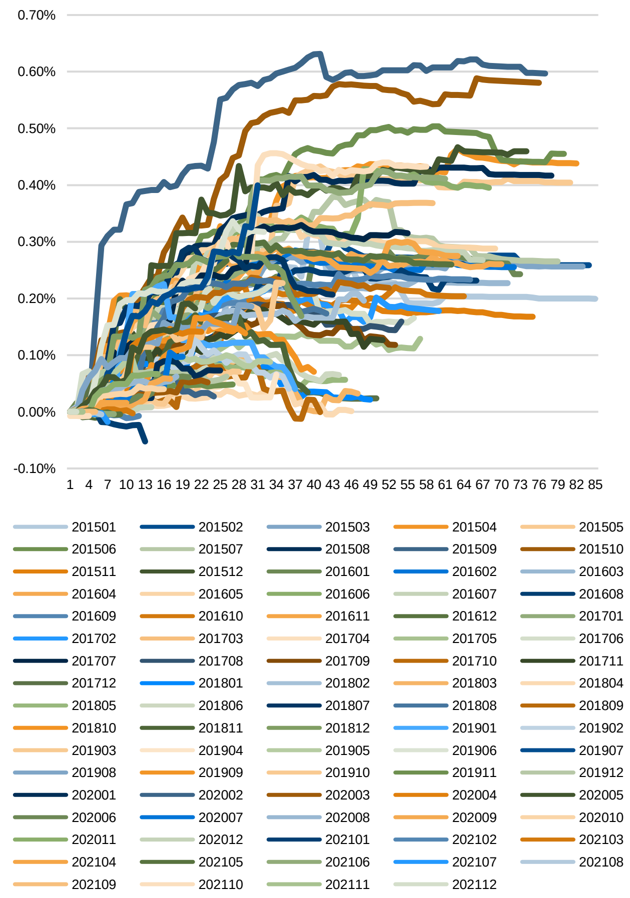
Financial lease Net Loss

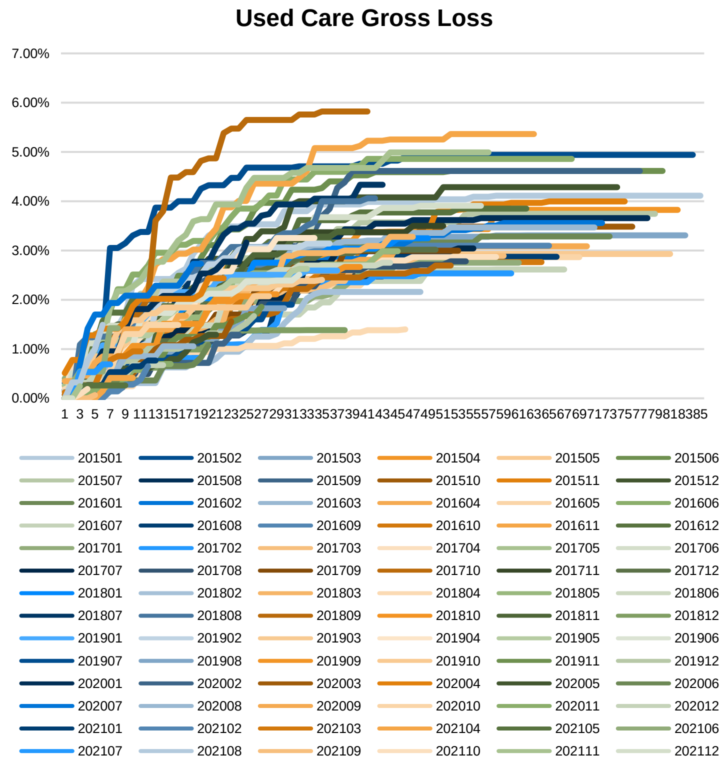


New Car Gross Loss



New Car Net Loss





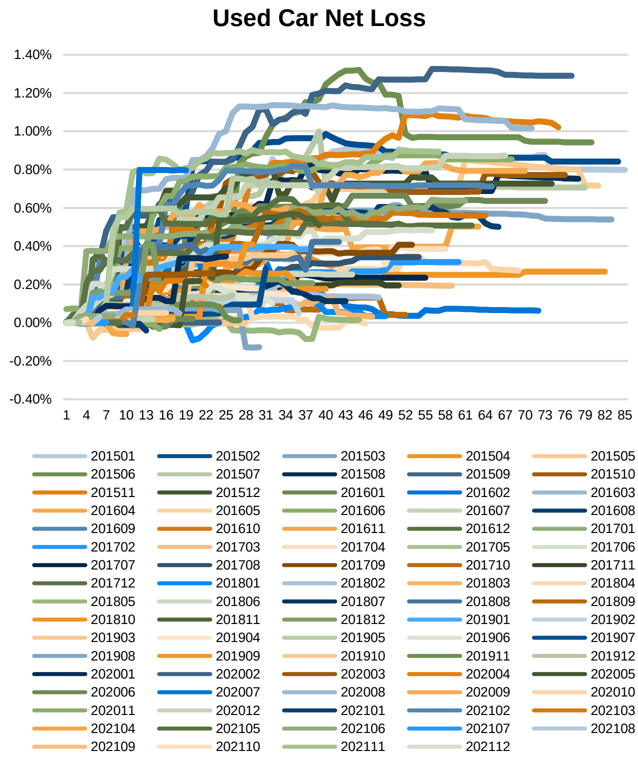
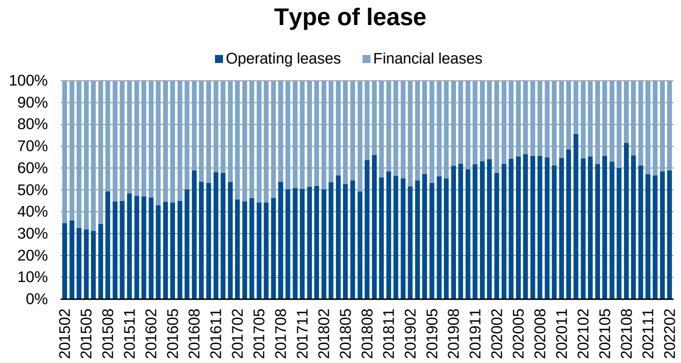
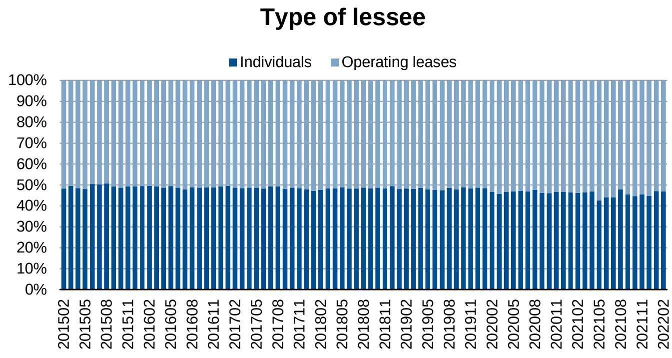
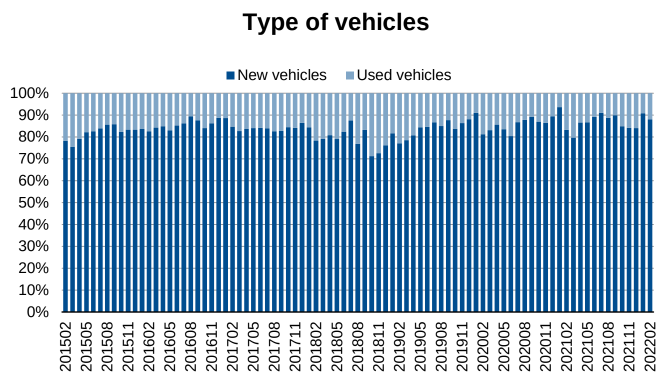


Figure 19: Historical data composition by categories







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