S&P Global Ratings

Research

Presale:

Discover Card Execution Note Trust (Class A(2023-2))

June 16, 2023

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Preliminary rating

Class	Preliminary rating	Preliminary amount (mil. $)	Credit support (%)	Expected maturity date	Legal maturity date
A(2023-2)	AAA (sf)	500.00	21.0(i)	June 15, 2026	June 15, 2028

Note: This presale report is based on information as of June 16, 2023. The rating shown is preliminary. This report does not constitute a recommendation to buy, hold, or sell securities. Subsequent information may result in the assignment of a final rating that differs from the preliminary rating. (i)This is a delinked trust. Credit support includes previously issued class B, C, and D notes.

Profile

Issuer trust collateral	Undivided investor interest in Discover Card Master Trust I's series 2007-CC collateral certificate, which is collateralized by receivables generated from designated Discover Card accounts.
Master trust	Discover Card Master Trust I.
Master trust collateral	Receivables generated from credit card accounts owned by Discover Bank. The master trust's assets may include receivables generated from credit card accounts owned by a Discover Bank affiliate.
Originator, sponsor, and servicer	Discover Bank (BBB/Stable/--), a limited-purpose bank and operating subsidiary of Discover Financial Services Inc. (BBB-/Stable/--).
Depositor and transferor	Discover Funding LLC.
Indenture trustee	U.S. Bank Trust Co. N.A.
Bank account provider	U.S. Bank N.A.
Owner trustee	Wilmington Trust Co.

Rationale

The preliminary 'AAA (sf)' rating assigned to Discover Card Execution Note Trust's class A(2023-2) fixed-rate DiscoverSeries notes reflects:

- Our view of the 21.00% credit support provided by the subordinated class B, C, and D notes, which we believe is sufficient to withstand the simultaneous stresses we apply to our 5.00%

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base-case loss rate, 18.00% base-case payment rate, 16.00% base-case yield, and 2.00% purchase-rate assumptions for the notes. We also used stressed excess spread and note interest rate assumptions to assess whether sufficient credit support is available for the notes, in our view. The stress assumptions outlined above are based on our current criteria and assumptions (see "U.S. Credit Card Securitizations: Methodology And Assumptions," published Aug. 24, 2017).

- Our view that the 7.00% minimum seller's interest is sufficient in our stress scenarios to absorb dilutions or noncash reductions in the receivables.
- The timely payment of interest each month and full principal repayment made by the legal final maturity date under our stressed cash flow modeling scenarios for the assigned preliminary rating.
- Our expectation that under a moderate ('BBB') stress scenario, all else being equal, the preliminary rating on the notes will be within our credit stability limits.
- Our view of the credit risk in the collateral loan pool based on our economic forecast, the credit quality and historical performance of the master trust portfolio's receivables, the collateral characteristics, and vintage performance data.
- The trust receivables performance has remained steady so far this year. We believe our base-case and stressed assumptions continue to adequately capture the credit risks of the credit card receivables and corresponding performance, our updated macroeconomic forecast for the U.S., and our forward-looking view of the credit card sector.
- Our view of Discover Bank's (BBB/Stable/--) servicing experience and our view of its account origination, underwriting, account management, collections, and general operational practices.
- Our view of the transaction's payment structure, cash flow mechanics, and legal structure.

Environmental, Social, And Governance (ESG) Factors

Our rating analysis considers a transaction's potential exposure to ESG credit factors. For credit card ABS, we view the exposure to environmental credit factors as below average, to social credit factors as above average, and to governance credit factors as average (see "ESG Industry Report Card: Credit Card Asset-Backed Securities," published March 31, 2021). In our view, the transaction's exposure to ESG credit factors is in line with our sector benchmark.

We view the transaction's exposure to social credit factors as above average, given the relatively high interest rates for borrowers who carry a balance month to month. However, we believe our approach to determining yield stresses, which considers the effect of any potential legislation or regulatory actions on interest rates and fees, adequately accounts for this.

We also view the transaction's exposure to governance credit factors as average, reflecting the originator's active role managing the revolving collateral pool over the transaction's life, which exposes investors to the risk of loosening underwriting standards or potential adverse selection. To account for this risk, we assumed that the pool's composition and quality will reflect the originator/servicer's track records, operational strategies, and the historical performance data across varying economic cycles, typically resulting in a higher expected loss than that of the actual performance data.

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Class A(2023-2) Note Summary

The note structure is unchanged from the prior issuances, including the issuer, eligible accounts and receivables, payment priority, collections and allocation mechanics, early redemption events, and events of default.

The following are key features of the class A(2023-2) issuance:

- The notes pay interest monthly at a fixed rate that is to be determined.
- Our preliminary rating on the notes addresses the full principal payment by the legal maturity date rather than the expected maturity date.
- The notes' credit support will be provided by class B, C, and D DiscoverSeries notes. Based on the transaction documents, the note issuance trust may issue additional tranches of class A notes if the minimum required amount of the class B, C, and D notes is outstanding to support them.
- The class A notes have a minimum of 21.00% credit support when expressed as a percentage of the entire capital structure, provided by class B, C, and D notes.

Collateral Overview

We believe the receivables designated to the master trust reflect a geographically diversified portfolio of well-seasoned prime accounts. The trust's collateral characteristics remained strong throughout the COVID-19 pandemic. The average account balance is slightly below pre-pandemic levels but has remained steady at around $3,000 since 2021. The average credit limit continues to increase. We attribute this to the high concentration of highly seasoned accounts, which have longer payment histories and are generally more predictable than newly originated accounts. As of May 31, 2023, 100% of the receivables were generated by accounts aged more than 60 months. Receivables with FICO scores of 720 and greater accounted for about 67.88% of the total trust, and receivables with FICO scores below 660 represented 7.98% of the trust. Assuming this pool's collateral composition does not change, we believe the receivables' strong performance will continue over the next 12 months (see charts 1-3).

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Chart 1

Historical master trust average account balance and credit line

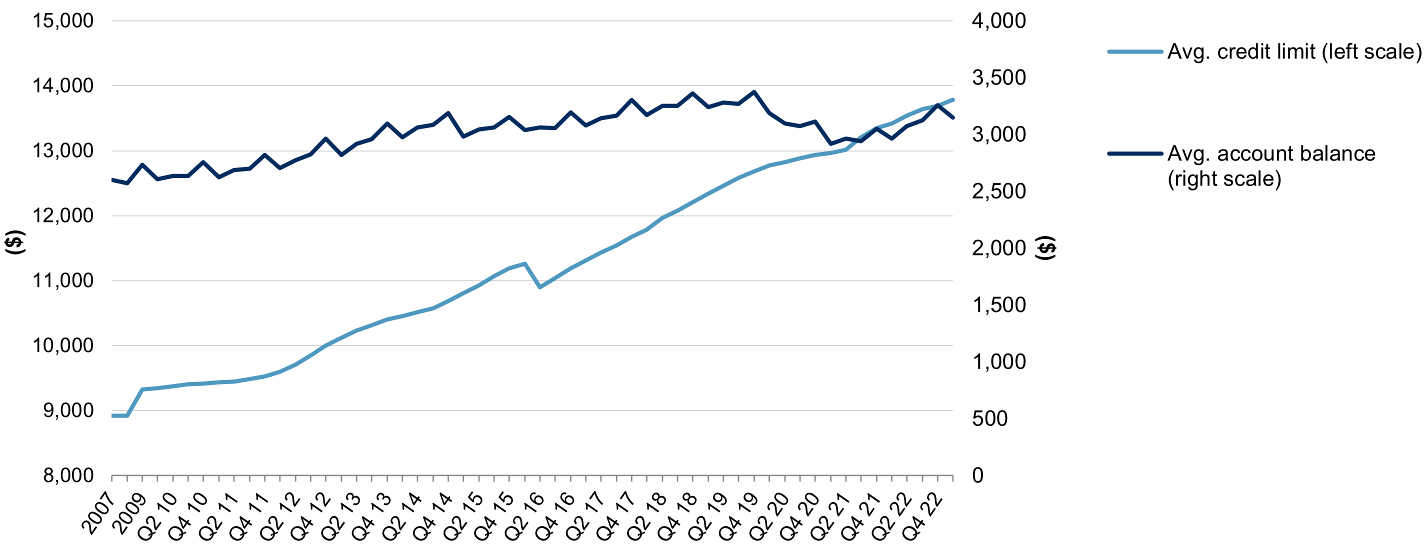

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Chart 2

Historical master trust seasoning

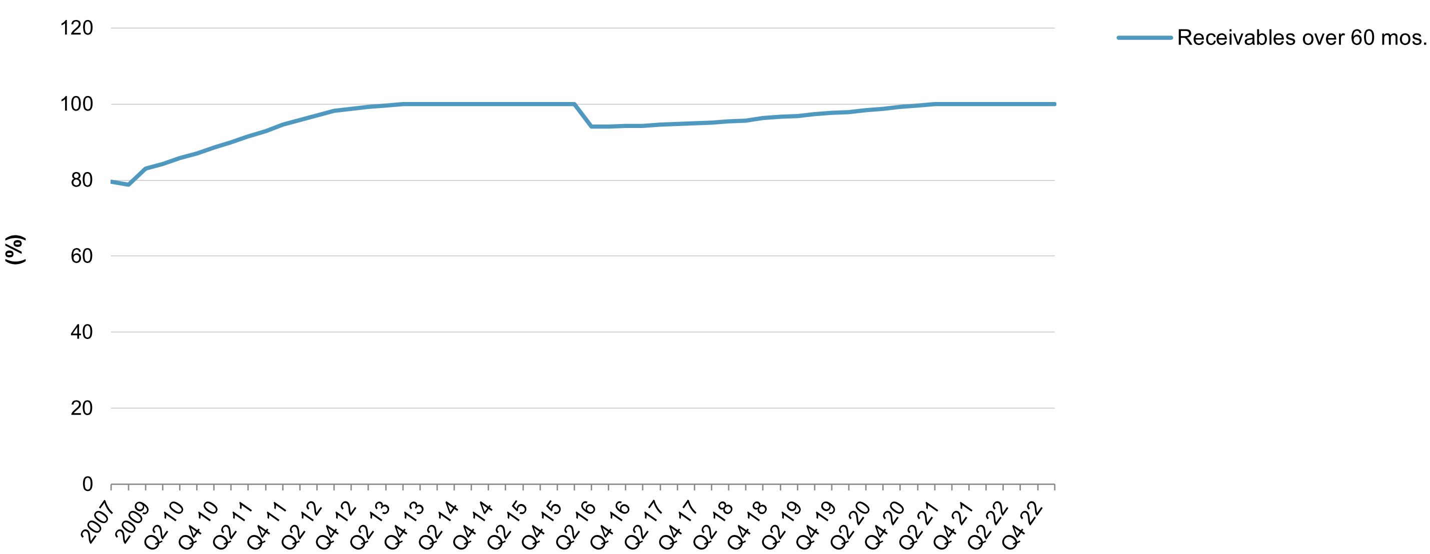

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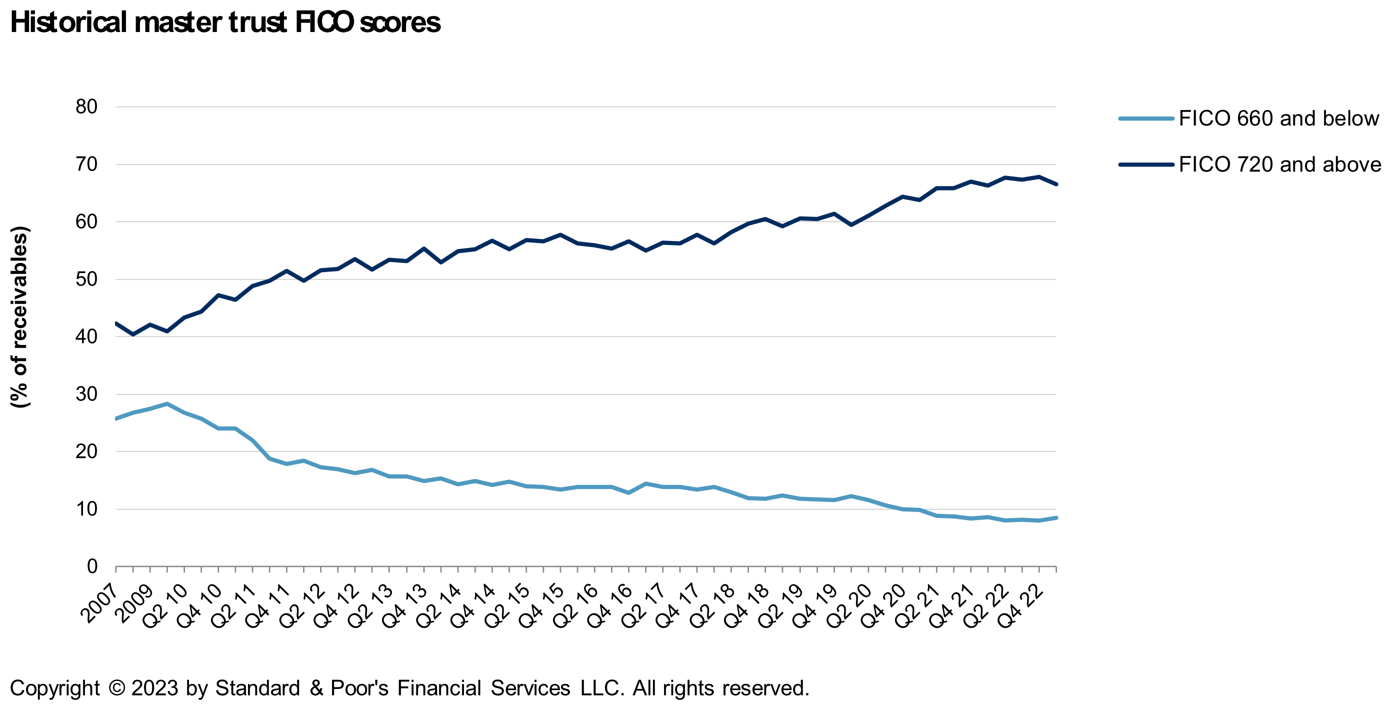
Chart 3



S&P Global Ratings' Credit Rating Assumptions

Our base-case assumptions generally reflect our view of the trust's:

- Expected performance during multiple economic scenarios and forecasted economic variables for the next 18-24 months, based on trust-specific performance trends (i.e., delinquency, delinquency roll rates, pool stratification quality and consistency, underwriting, and account management);
- Performance relative to its peers; and
- Sensitivity to our forecasted economic variables, such as unemployment and bankruptcy rates.

Table 1 shows a summary of the stresses we used when assigning our preliminary rating to the class A(2023-2) notes.

Table 1

S&P Global Ratings' credit rating scenarios

	Net losses(i)	Total payment rate(ii)	Yield(ii)	Purchase rate(ii)
Base-case assumption (%)	5.00	18.00	16.00	N/A
'AAA' rating stresses (%)	31.00	8.75	11.00	2.00

(i)In the 'AAA' rating scenario, losses rise to the stressed level over 12 months. (ii)The total payment, yield, and purchase rates start at the stressed levels in the first month of our cash flow runs. N/A--Not applicable.

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Our loss rate assumption is generally above the trust's current performance, while our payment rate and yield assumptions are generally below the trust's current performance. This reflects our view that revolving pools could change over time and performance could weaken if unseasoned accounts with lower credit quality are included in the trust. The stresses we use are commensurate with 'AAA' level rating scenarios and are based on our criteria "U.S. Credit Card Securitizations: Methodology And Assumptions," published Aug. 24, 2017.

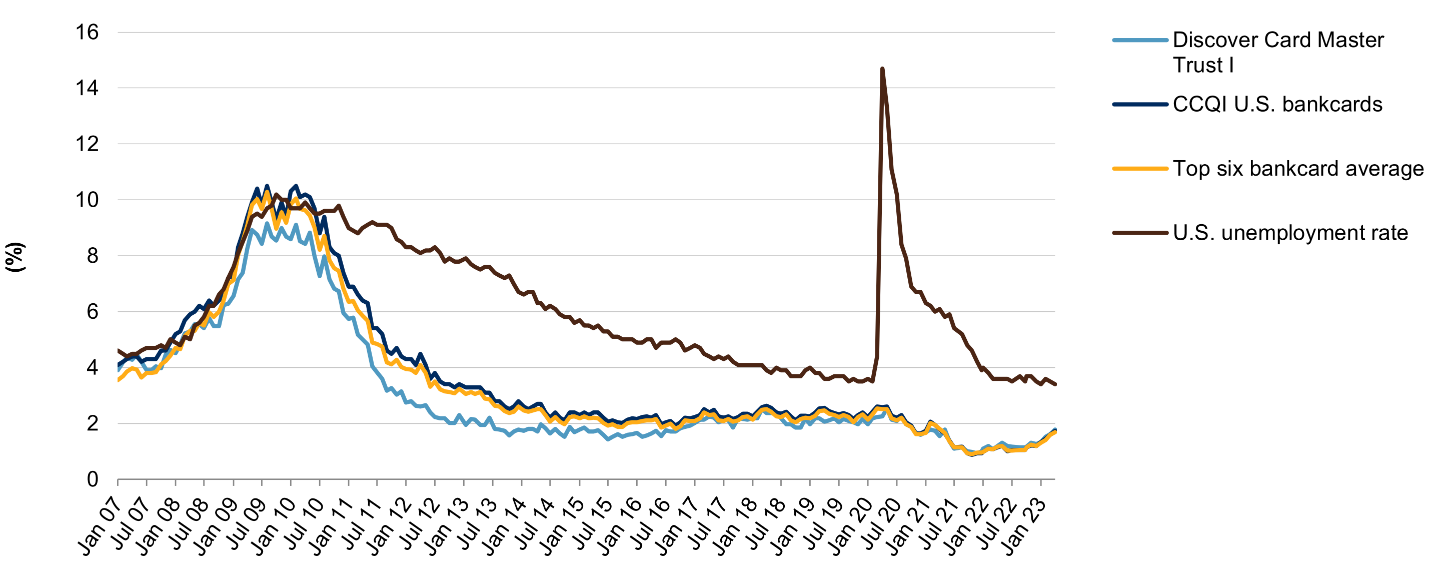
Loss Rate

Our base-case loss assumption for this trust is 5.00%. We expect Discover Bank's master trust loss rates to remain stable through 2023, based on low delinquencies, the current pool composition, and our forward–looking assumptions, which incorporate economic variables such as our U.S. unemployment rate forecast of 4.1% for 2023 under our baseline economic scenario.

The 31.00% stressed annualized peak loss assumption we use in our cash flow model for this pool is lower than the 33.00% we established for a benchmark pool in an extreme recession scenario for a 'AAA (sf)' rating. The lower stress we apply reflects our view that this pool could perform better than the benchmark pool during a downturn, based on our observation of that it had lower losses than those of the benchmark pool during the last recession. Since its inception in 2007 until 2020, net losses for the trust generally remained lower than the industry's average net losses (as calculated in the U.S. Credit Card Quality Index [CCQI]) and were at least 1.00% lower than the unemployment rate. Since 2020, Discover Card Execution Note Trust's net losses have trended closer to its peers (see chart 4).

Chart 4

Loss rate and U.S. unemployment rate



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Payment Rate

Our base-case total payment rate assumption for the pool is 18.00%. We view the pool's payment rate performance as strong and consistent, likely due to the Discover credit card's well-known cash-back rewards program. Cash-back rewards programs usually attract convenience users who tend to pay down their balances in full each month. As of May 31, 2023, approximately 26.69% of obligors made full payments and 5.66% made minimum payments (see chart 5). In our stress scenarios, we assume that the number of convenience users in the pool declines before an amortization scenario while the portion of revolvers increases, leading to significantly lower payment rates. Therefore, our base-case and stress assumptions are well below the actual payment rates. During the last recession, the trust's payment rate generally remained higher than the U.S. bank card average, as calculated in the U.S. CCQI (see chart 6).

Chart 5

Historical master trust obligor minimum and fully payments

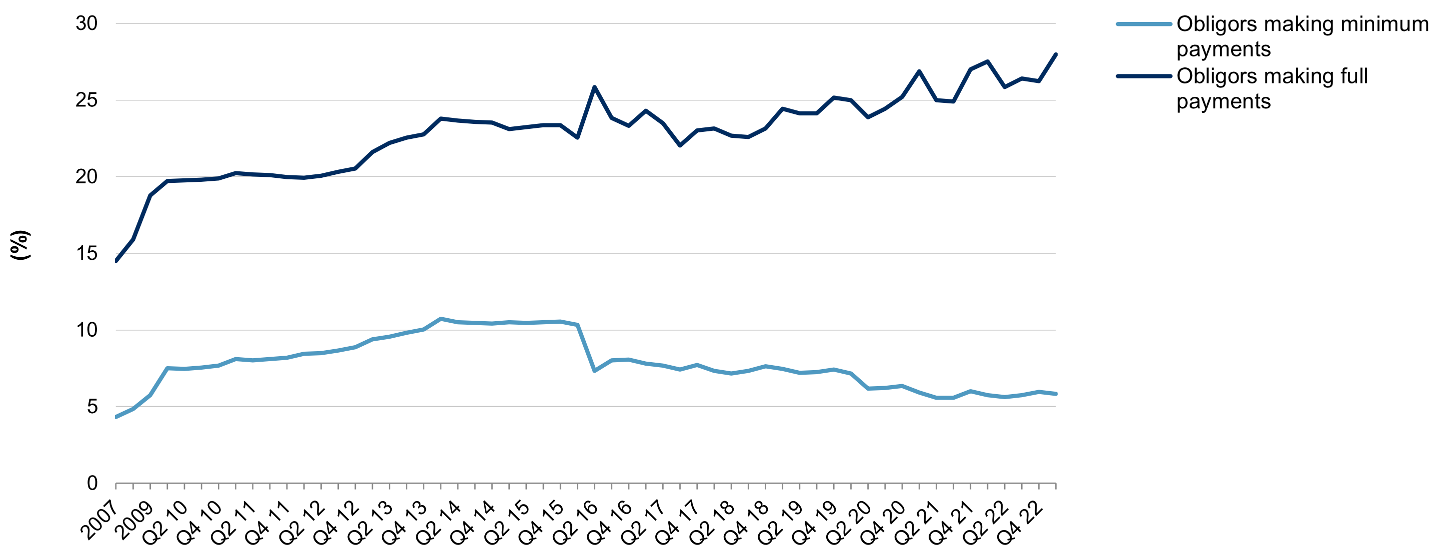

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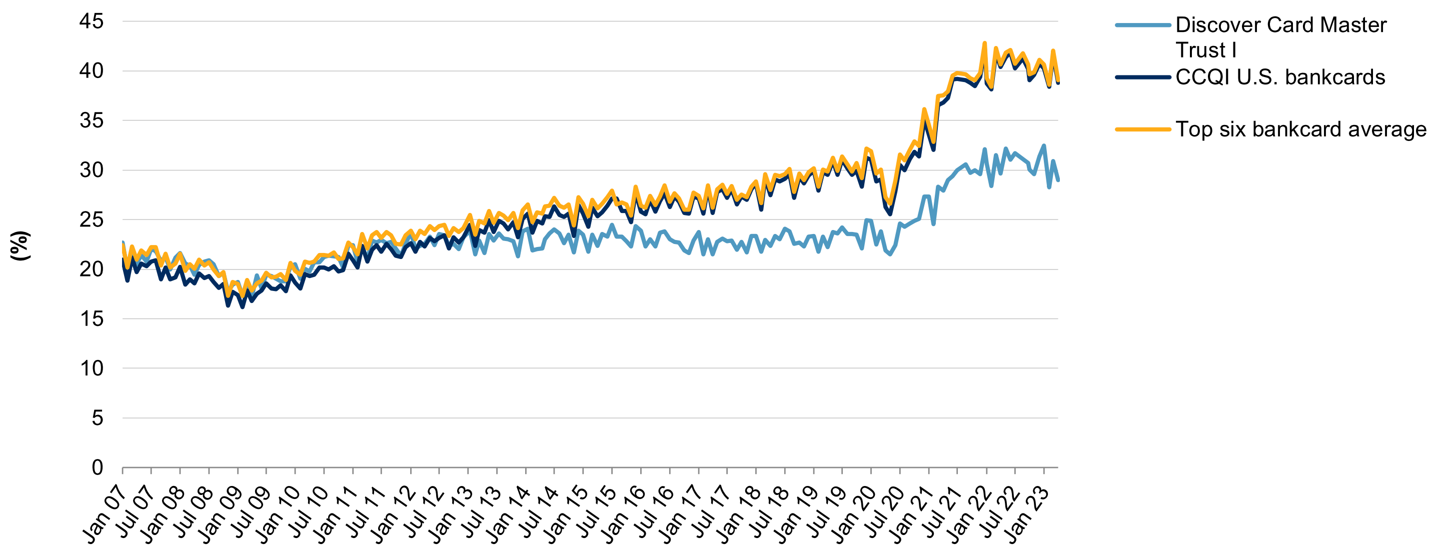
Chart 6

Payment rate



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Yield

Our base-case yield assumption is 16.00%. For the past five years, the DiscoverSeries' receivables have generally produced yields that are lower than our CCQI (see chart 7).

Consistent with our criteria, in cash flows at the 'AAA' rating level for bank credit card pools, we generally assume that yield will be compressed at 10.00%-13.00% by the time a trust enters rapid amortization. For this trust, our 11.00% stress assumption at the 'AAA' rating level is 68.75% of our 16.00% base-case assumption. Yield for this trust is relatively low because of the obligors' high credit quality. The smaller haircut for this trust (relative to our example of haircut ranges listed in our criteria) reflects our assumption that seasoned high-credit-quality cardholders are likely to experience smaller increases in delinquencies than nonprime accounts in an economic downturn, resulting in less volatility in stressed yield compared with pools that include a high portion of nonprime accounts. We also consider the effect that legislation or regulatory actions could have on interest rates and fees, as well as competitive pressures bringing yield to the 10.00%-13.00% range (see chart 7).

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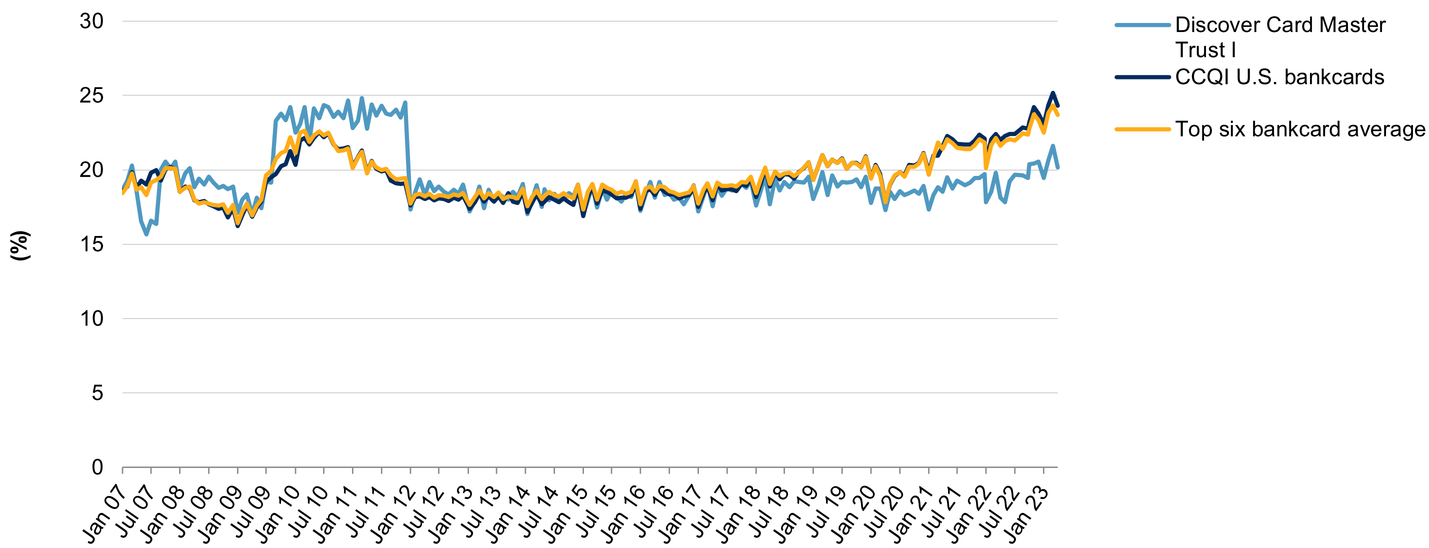
Chart 7

Yield



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Purchase Rate

We assume an approximate 2.00% purchase rate for the preliminary 'AAA (sf)' rated notes in the pool. Our purchase rate assumption accounts for our credit rating on the originator relative to the preliminary rating assigned to the notes, the originator's ability to continue generating and transferring receivables to the master trust, and the originated receivables' credit characteristics.

For this trust, our purchase rate assumptions consider the issuer credit rating assigned to Discover Bank (BBB/Stable/--), the originator. Discover Bank's performance, as both the originator and servicer of the Discover Card Master Trust I credit card accounts and receivables, is strong in our view. We believe Discover Bank has a proven ability to consistently originate, manage, and service accounts and receivables throughout economic and business cycles.

Sensitivity Analysis

Our ratings incorporate credit stability as one of several factors that we use to determine an issuer's or an issue's creditworthiness. Accordingly, we undertook sensitivity analysis assuming the pool's base-case loss rate would increase to our current 'BBB' stressed loss rate assumption. We believe that under a moderate ('BBB') stress scenario, all else being equal, our preliminary rating on the class A(2023-2) notes will be within the credit stability limits specified in section A.4 of the Appendix in "S&P Global Ratings Definitions," published June 3, 2023.

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3002519

Structural Overview

The notes are part of the DiscoverSeries, in which delinked tranches can be issued as long as certain issuance conditions are met, including sufficient subordination to provide the required credit support. The collateral for the note issuance trust is an undivided investor interest in Discover Card Master Trust I's series 2007-CC collateral certificate, which in turn is collateralized by the receivables from revolving credit card accounts that Discover Bank originates and services.

Payment Priority

The available finance charge collections are allocated to the DiscoverSeries notes on each distribution date (see table 2).

Table 2

Finance charge waterfall

Priority	Payment
1	The class A(2023-2) notes' monthly interest, swap payments (if any), or accreted discount.
2	The class B notes' monthly interest, swap payments (if any), or accreted discount.
3	The class C notes' monthly interest, swap payments (if any), or accreted discount.
4	The series 2007-CC collateral certificate's servicing fees.
5	The class D notes' monthly interest, swap payments (if any), or accreted discount.
6	Reimburse the current charged-off receivables.
7	Reimburse the class A(2023-2) notes' nominal liquidation amount deficits.
8	Reimburse the class B notes' nominal liquidation amount deficits.
9	Reimburse the class C notes' nominal liquidation amount deficits.
10	Reimburse the class D notes' nominal liquidation amount deficits.
11	Make targeted deposits into the accumulation reserve subaccounts in case the tranches of notes mature.
12	To the class C notes' reserve subaccounts if the excess spread funding triggers have been breached.
13	To the class D notes' reserve subaccounts if the excess spread funding triggers have been breached.
14	To the master trust's finance charge collections reallocation account for reallocation to other master trust certificate series and other note series.
15	To Discover Bank.

If an early redemption event occurs, the principal collections that are allocated to the DiscoverSeries notes, in addition to the series' finance charge amounts that are available to reimburse charged-off receivables and the subordinated notes' nominal liquidation amount deficits, will be available to make payments subject to the indenture supplement's cash flow provisions (see table 3).

Table 3

Principal waterfall

Priority	Payment(i)
1	Deposit shortfalls in the class A(2023-2) notes' monthly interest, swap payments, or accreted discount to the extent of the series' principal amounts allocable to the class B, C, and D notes.

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Table 3

Principal waterfall (cont.)

Priority	Payment(i)
2	Deposit shortfalls in the class B notes' monthly interest, swap payments, or accreted discount to the extent of the series' principal amounts allocable to the class C and D notes.
3	Deposit shortfalls in the class C notes' monthly interest, swap payments, or accreted discount to the extent of the series' principal amounts allocable to the class D notes.
4	Shortfalls in the series 2007-CC collateral certificate servicing fees to the extent of the series' principal amount allocable to the class B, C, and D notes.
5	Make any targeted deposit to pay principal on the class A(2023-2) notes.
6	Make any targeted deposit to prefund the class A(2023-2) notes.
7	Make any targeted deposit to pay principal on the class B notes.
8	Make any targeted deposit to prefund the class B notes.
9	Make any targeted deposit to pay principal on the class C notes.
10	Make any targeted deposit to prefund the class C notes.
11	Make any targeted deposit to pay principal on the class D notes.
12	Make deposits into the master trust's principal collections reallocation account for reallocation to other master trust certificate series and note series.
13	Make deposits into the master trust's collections account for reinvestment in new receivables.

(i)Swap payments are not applicable for these notes.

The early redemption events include the following:

- The notes are not paid in full on their expected maturity date.
- The note issuance trust becomes an investment company under the Investment Company Act of 1940, as amended.
- Certain insolvency or receivership events regarding the originator or depositor occur.
- An amortization event occurs regarding the collateral certificate, including the originator or depositor failing to maintain sufficient principal receivables to collateralize the certificates and the notes issued by the master trust and the note issuance trust, respectively; the depositor failing to make any payment or deposit within five business days after the required date; the master servicer or servicer is terminated because of insolvency or certain covenants are breached; or the master trust becomes an investment company under the Investment Company Act of 1940, as amended.
- The three-month average excess spread amount and the three-month average group excess spread amount for the DiscoverSeries notes and the master trust certificate group, respectively, are both less than zero.
- There is no first-priority perfected security interest in any receivable that was transferred to the master trust, or none of the related representations and warranties were deemed inaccurate.

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Related Criteria

- General Criteria: Environmental, Social, And Governance Principles In Credit Ratings , Oct. 10, 2021
- Criteria | Structured Finance | General: Global Framework For Payment Structure And Cash Flow Analysis Of Structured Finance Securities , Dec. 22, 2020
- Criteria | Structured Finance | Legal: U.S. Structured Finance Asset Isolation And Special-Purpose Entity Criteria , May 15, 2019
- Criteria | Structured Finance | General: Counterparty Risk Framework: Methodology And Assumptions , March 8, 2019
- Criteria | Structured Finance | General: Incorporating Sovereign Risk In Rating Structured Finance Securities: Methodology And Assumptions , Jan. 30, 2019
- Criteria | Structured Finance | ABS: U.S. Credit Card Securitizations: Methodology And Assumptions , Aug. 24, 2017
- Criteria | Structured Finance | General: Global Framework For Assessing Operational Risk In Structured Finance Transactions , Oct. 9, 2014
- General Criteria: Global Investment Criteria For Temporary Investments In Transaction Accounts , May 31, 2012
- General Criteria: Principles Of Credit Ratings , Feb. 16, 2011
- Criteria | Structured Finance | General: Methodology For Servicer Risk Assessment , May 28, 2009

Related Research

- S&P Global Ratings Definitions, June 9, 2023
- U.S. Credit Card Quality Index: Monthly Performance--April 2023, May 26, 2023
- Economic Outlook U.S. Q2 2023: Still Resilient, Downside Risks Rise, March 27, 2023
- U.S. And Canada Credit Cards ABS Review, Feb. 23, 2023
- Global Structured Finance 2023 Outlook, Jan. 11, 2023

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