

CREDIT OPINION

19 December 2023

Update



Send Your Feedback

RATINGS

Caisse de depot et placement du Quebec

Domicile	Quebec City, Quebec, Canada
Long Term CRR	Not Assigned
Long Term Issuer Rating	Aaa
Type	LT Issuer Rating - Dom Curr
Outlook	Stable

Please see the [ratings section](#) at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

Contacts

Robert Colangelo +1.416.214.3847
 VP-Sr Credit Officer
 robert.colangelo@moodys.com

Evan Cybart +1.212.553.3981
 Associate Analyst
 evan.cybart@moodys.com

Robert M. Callagy +1.212.553.4374
 Associate Managing Director
 robert.callagy@moodys.com

Marc R. Pinto, CFA +1.212.553.4352
 MD-Financial Institutions
 marc.pinto@moodys.com

» Contacts continued on last page

Caisse de depot et placement du Québec

Update following ratings affirmation

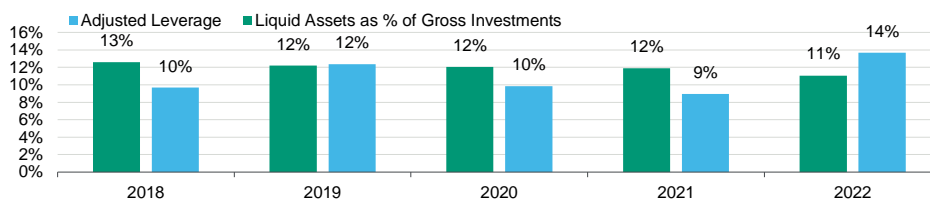
Summary

On 6 December 2023, we affirmed the ratings of [Caisse de dépôt et placement du Québec's](#) (CDPQ) and its wholly-owned subsidiary, [CDP Financial Inc.](#) The outlooks on CDPQ and CDP Financial Inc. were maintained stable. CDPQ's Aaa long-term issuer rating is based on its aa2 Baseline Credit Assessment (BCA) as well as instrument-level structural support under our assumption that creditors have a priority of claim over its depositors, creating high coverage of assets for creditors. CDPQ's aa2 BCA reflects the pension asset manager's strong liquidity and predictability of future cash flows, as well as sound financial policies and low leverage. As well, CDPQ's governing legislation mandates it as the exclusive asset manager for public sector investment pools in the Canadian [Province of Quebec](#) (Aa2 stable) without responsibility for the underlying pension obligations. As such, we view CDPQ as fully funded. These credit strengths are offset by a high proportion of high risk assets (as defined under our methodology), limited visibility into depositor contributions and withdrawals, and potential governance challenges associated with a dual mandate to optimize returns and also contribute to the economic development of Quebec.

Over the next 3-5 years, we believe that the investment characteristics of certain asset classes will change reflecting a weakening macroeconomic outlook as well as lingering effects from the pandemic including shifting private sector preferences, such as greater employment away from office real estate. However, the rating agency noted that CDPQ has a reputation for strong investment acumen. In addition, the fund's long investment horizon is a considerable advantage as it affords them time to make portfolio shifts, particularly with less liquid investments.

Exhibit 1

Adjusted leverage is low and liquid assets offer strong coverage of obligations



Fiscal year ending December 31, Liquid assets represent cash, short-term investments, securities purchased under reverse repurchase agreements and Canadian government bonds. Moody's leverage ratio is adjusted for improved comparability between US GAAP and IFRS by deducting nettable, but not offset, repurchase agreements and derivative contracts.

Source: Data from issuer reports, Moody's Investors Service

CDP Financial Inc. has a backed commercial paper rating of Prime-1, reflecting the unconditional and irrevocable guarantee of its debt obligations by CDPQ. CDP Financial Inc.

adds a moderate degree of leverage by issuing commercial paper and term debt guaranteed by CDPQ, with the goal of diversifying funding sources and enhancing overall returns for the fund's depositors.

Credit strengths

- » Governing legislation that mandates CDPQ as the exclusive asset manager for the provincial social retirement plan and other public investment pools without responsibility for the underlying pension obligations;
- » Creditors have an effective priority over pension obligations and benefit from very strong coverage by high quality liquid assets;
- » Comparably higher levels of liquidity and lower leverage than peers;
- » Sound financial policies and an investment profile that matches its debt obligations.

Credit challenges

- » Limited visibility around net depositor contributions or withdrawals;
- » Dual mandate to optimize returns for the fund's depositors and contribute to the economic development of Quebec, which may result in governance challenges;
- » A high level of high risk assets, which we define as all investments excluding investment grade fixed income, although CDPQ's proportion is consistent with its Moody's rated peers.

Outlook

The stable outlook reflects Moody's expectations that CDPQ's credit fundamentals, specifically its strong and stable liquidity and low leverage, will remain unchanged over the next 12 to 18 months. It also reflects the stable outlook of the Province of Quebec's rating, which is a constraint on CDPQ's BCA.

The stable outlook on CDP Financial Inc.'s ratings reflects the outlook of its parent.

Factors that could lead to an upgrade

- » An upgrade of the Aaa long-term issuer rating is not possible;
- » An upgrade of the aa2 BCA could be driven by a sustained decrease in CDPQ's high risk assets.

Factors that could lead to a downgrade

CDPQ's BCA could be downgraded if there was:

- » A material reduction in liquid assets or if leverage was to increase above 25% for a sustained period of time;
- » A change in provincial legislation which allowed the CDPQ's depositors to select an alternative asset manager. However, given the publicized and political nature of such an act, we view the probability of this outcome to be very low;
- » A legal precedent that cast doubt on the status of CDPQ's obligations as having preference over depositor's obligations.

A downgrade of the BCA would not likely lead to a downgrade of the Aaa long-term issuer rating because of Moody's expectation of extraordinary support from its support provider.

- » A downgrade in the rating of the Government of Canada or the Province of Quebec would lower the BCA as it is a BCA constraint;
- » CDP Financial Inc.'s ratings could be downgraded if CDPQ's rating was downgraded, or if we believed the guarantee provided by CDPQ to its obligations would not be honoured.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on <https://ratings.moody's.com> for the most updated credit rating action information and rating history.

Key indicators table

Exhibit 2

Statistics for Caisse de dépôt et placement du Québec [1][2]	2022	2021	2020	2019	2018
Gross Assets (C\$ millions)	473,807	472,366	412,093	392,619	350,003
Depositors' Net Assets (C\$ millions)	401,887	419,797	365,492	340,109	309,511
Fixed Income % Depositors' Net Assets	30%	31%	31%	30%	31%
Equity % Depositors' Net Assets	45%	48%	50%	49%	49%
Real Assets % Depositor's Net Assets	26%	21%	19%	20%	20%
Other % Depositors' Net Assets	0%	0%	1%	1%	1%
Liabilities (C\$ millions)	71,920	52,569	46,601	52,510	40,492
Liabilities % Gross Assets	15%	11%	11%	13%	12%
Unsecured Debt (C\$ millions)	34,809	25,533	23,038	21,494	15,809
Unsecured Debt % Gross Assets	7.3%	5.4%	5.6%	5.5%	4.5%
Secured Funding (C\$ millions)	33,534	21,754	19,068	28,336	22,398
Secured Funding % Gross Assets	7.1%	4.6%	4.6%	7.2%	6.4%
Other Liabilities % Gross Assets	0.8%	1.1%	1.1%	0.7%	0.7%
Indebtedness towards Depositors (C\$ millions)	2,399	2,628	6,702	3,373	3,224
Net Participation Deposits (C\$ millions)	399,488	417,169	358,790	336,736	306,287
Net Participation Deposits % Gross Assets	84.3%	88.3%	87.1%	85.8%	87.5%
Derivative Notionals (C\$ millions)	413,583	361,445	364,289	397,575	391,496
Annual Reported Return (%)	-5.6%	13.5%	7.7%	10.4%	4.2%
Benchmark Return (%)	-8.3%	10.7%	9.2%	11.9%	2.4%

[1] Information is based on IFRS financial statements. [2] As at fiscal year end December 31.

Source: Data from issuer reports, Moody's Investors Service

Profile

CDPQ is a mandatary (or agent) of the province of Québec and manages institutional funds from public and quasi-public institutions, primarily pension and insurance funds in Québec. The assets managed by the CDPQ are funded largely by 'participation deposits' from its institutional clients that represent a participation similar to equity in the CDPQ's individual funds or investment portfolios. CDPQ is an asset manager and does not have legal responsibility for the pension or insurance liabilities of its depositors.

Detailed credit considerations

Funded Status - CDPQ not responsible for the public sector benefit obligations, although it has limited visibility around net depositor contributions or withdrawals

As an asset manager, CDPQ is not responsible for the administration of benefits, nor in the setting of actuarial assumptions of the underlying public sector obligations. These are both the responsibility of its government entity depositors, and as such, CDPQ cannot have a pension shortfall nor a surplus. We therefore consider CDPQ to be fully funded for analytical purposes. That said, we note that CDPQ's underlying obligation has a comparably higher level of complexity relative to its two Canadian asset manager peers, specifically with respect to limited visibility around net depositor contributions or withdrawals.

CDPQ has an initial Funding Ratio score of aaa, which we make a one-notch downward adjustment to aa1 to account for the limited visibility around net depositor contributions and withdrawals.

Liquidity - Highly liquid investment portfolio supported by a high proportion of publicly traded equities

As of 31 December 2022, CDPQ's coverage of liquid assets to cash obligations was strong with a ratio of 391%, although this is weaker compared with a ratio of 717% in fiscal 2021. CDPQ's coverage is supported by very high levels of fixed income assets and publicly traded equities. We also note that in contrast to a number of its Canadian peers, CDPQ has only a minimal level of portfolio level financing that encumbers its assets.

This strong liquidity offsets the limited visibility around net contribution flows from depositors beyond a rolling three-year horizon. At of 31 December 2022, CDPQ's CAD13.1 billion in commercial paper and CAD19.7 billion in term notes were covered roughly 1.4 times

by CAD46 billion of liquid high quality fixed income assets (including Canadian and US government securities, Canadian provincial securities and other highly liquid assets). This level of coverage has weakened slightly as CDPQ reduced fixed income and public equity investments in the past several years to support an increase in its target allocation to less liquid private equity, real estate and infrastructure assets to 46% from 41%. However, CDPQ also owns substantial amounts of marketable securities in the form of widely-traded equities and corporate debt instruments and has a USD4 billion committed revolving credit facility. In addition, CDPQ's liquidity monitoring incorporates appropriate valuation haircuts and stressed collateral funding requirements.

CDPQ' Liquidity score is aaa, which is in line with the initial score.

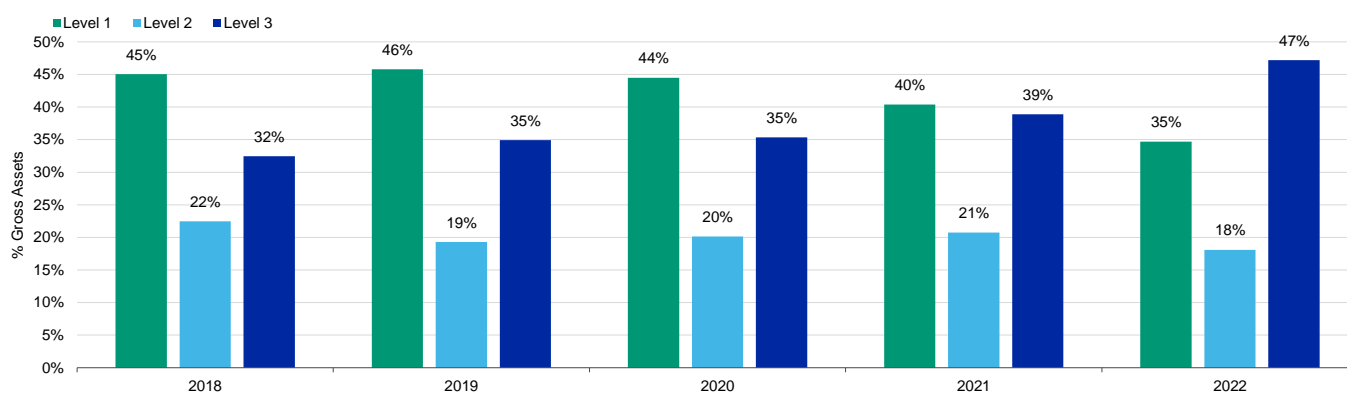
Asset Risk - High levels of less liquid assets, although mitigated by broad geographic and sector diversification

With a ratio of high risk assets (defined as all investments other than investment grade fixed income assets) to gross assets of 73% as of 31 December 2022, CDPQ has very high asset risk exposure, reflecting CDPQ investing a larger percentage of fund assets in less liquid Level 3 assets such as real estate, infrastructure and private equity. However, this ratio is broadly in line with its Moody's rated pension fund peer group. While CDPQ's investment in Level 3 assets has remained relatively stable over the years (Exhibit 3), it has grown, similar to peers, representing 47% of gross assets as of 31 December 2022. We note that CDPQ has a comparably lower rate of less liquid Level 3 assets relative to its peers.

Exhibit 3

CDPQ's less liquid Level 3 assets have grown, although this is mitigated by strong liquidity

Fair value hierarchy as a % of gross assets



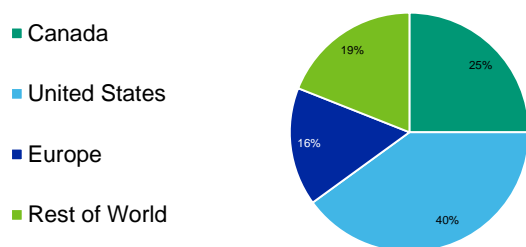
Fiscal year ended 31 December.

Source: Company Financials, Moody's Investors Service

As of 31 December 2022, CDPQ's investment portfolio remains well diversified globally (Exhibit 4) as well as across sectors (Exhibit 5). The benefits of this diversification strategy offsets higher liquidity and operational risks associated with CDPQ's growing exposure to Level 3 assets. In addition, this reduces common credit risks with the Canadian and Quebec economy, providing diversification away from the geographic location of its pension obligation and related contribution cash flows, with approximately 75% of its investment portfolio is invested outside of Canada.

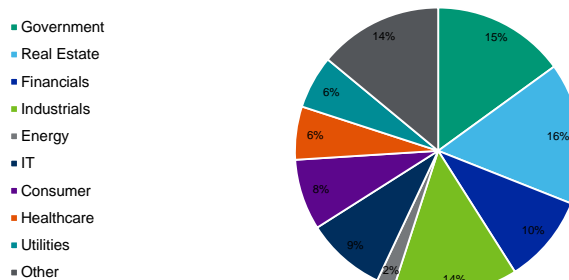
CDPQ generated a portfolio return for its fiscal year ended 31 December 2022 of -5.6%, which was down from 13.5% in fiscal 2021, although it was above the benchmark return of -8.3%. Both public equities and fixed income reported negative returns in 2022, while real assets experienced strong positive performance of 12% during the year. For the six months ended 30 June 2023, CDPQ generated a return of 4.2%, slightly ahead of its benchmark return of 4.1%, with all asset classes experiencing positive performance during this period.

Exhibit 4
CDPQ's investments are diversified globally...
 As of 31 December 2022



Source: Company Financials, Moody's Investors Service

Exhibit 5
...and are broadly diversified across sectors
 As of 31 December 2022



Source: Company Financials, Moody's Investors Service

CDPQ has an initial Asset Risk score of ba1, which we adjust upwards by three notches to baa1 to account for the benefits of geographic and sector diversification in its investment portfolio.

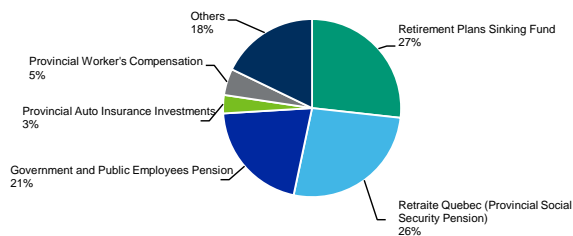
Financial Policy - Conservative financial policies and investment profile provides natural hedge to creditor obligations

CDPQ's financial policies are broadly conservative as expressed by our aa-score for Financial Policy. Overall, the pension asset manager has good liquidity and risk management practices that mitigate a modest level of leverage that creates refinancing and counterparty risks. CDPQ hedges currency risks within specialized portfolios and has natural currency matches between its investments and funding. About two-thirds of CDPQ's investment portfolio is in USD or CAD which aligns with its creditor obligations, much of which are denominated in USD.

Legal framework creates a captive client base

CDPQ's client base encompasses a broad range of provincial government and government-related pension plans, insurance plans and other types of funds. This base is exceptionally stable because most of these entities are required by provincial law to deposit their assets with CDPQ. As at 31 December 2022 (the most recent data available), CDPQ managed assets for 48 depositors, with almost three-quarters of the fund being ascribed to three main depositors (Exhibit 6). Each depositor invests its funds in specialized portfolios, which are internal accounts of CDPQ, and receives a return based on the performance of those portfolios.

Exhibit 6
Depositor's net assets
 As of 31 December 2022



Source: Company Financials, Moody's Investors Service

The stability of CDPQ's franchise is also supported by healthy investment returns. As of 31 December 2022, the average actual annualized portfolio return for the last five years was 5.8% compared to 4.9% for its internal benchmark portfolio. The benchmark portfolio is a weighted average of the benchmarks of CDPQ's depositors, which is determined by their individual investment allocation decisions. For 2022, CDPQ achieved annualized five-year returns between 4.2% to 6.7% for its eight largest depositors.

Potential corporate governance challenges associated with the CDPQ's dual mandate

CDPQ has a dual mandate to achieve an optimal return on capital within the framework of depositors' investment policies while at the same time contributing to Québec's economic development. Investments in Québec represented 17% of total assets at year end 2022. This investment profile reflects CDPQ's natural strengths evaluating investment opportunities in Québec due to their deep understanding of that market. CDPQ manages its investment strategy independently. Nevertheless, in a weaker economy, CDPQ could come under political pressure to support Québec in a way that could erode its ability to achieve the optimal return for depositors. CDPQ's rating anticipates that it will be able to balance the requirements of its dual mandate.

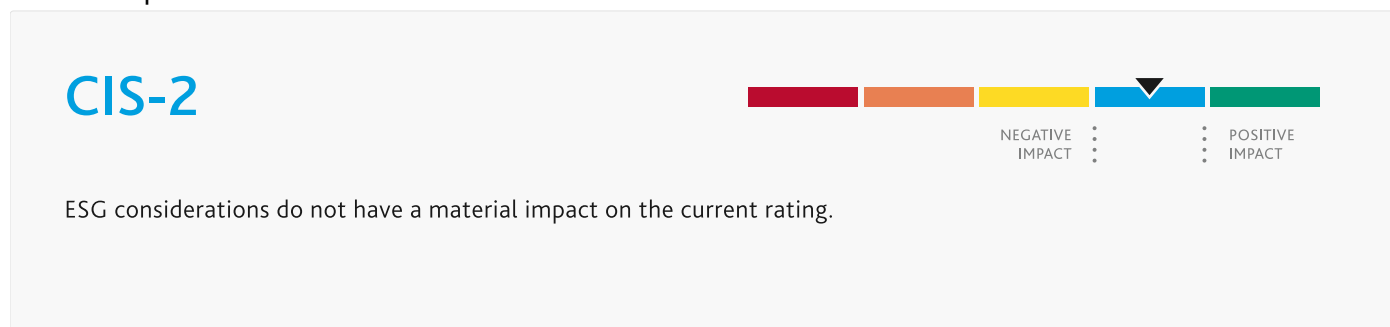
CDPQ's risk management philosophy, including its risk architecture and asset allocation strategy, has evolved and adapted significantly since the global financial crisis in 2008. Risk management practices are strong relative to international peers.

ESG considerations

Caisse de depot et placement du Quebec's ESG credit impact score is CIS-2

Exhibit 7

ESG credit impact score



Source: Moody's Investors Service

CDPQ's **CIS-2** indicates that ESG considerations do not have a material impact on its current rating, reflecting the limited rating impact of environmental, social and governance risks on the rating to date.

Exhibit 8

ESG issuer profile scores



Source: Moody's Investors Service

Environmental

CDPQ faces moderate environmental risk, primarily because of its investment portfolio's exposure to carbon transition and physical climate risks from the pension manager's holdings in the oil & gas and transportation sector as well as its real estate and infrastructure portfolios. CDPQ is committed to assist and influence sectors with elevated carbon transition risks.

Social

CDPQ faces high industrywide social risks arising from demographic and societal trends and customer relations that are common to pension asset managers. CDPQ is exposed to risks associated with changes in unemployment or immigration rates, which can impact contribution cash flows. However, in contrast to a pension fund, CDPQ does not have direct exposure to an aging population because it is not responsible for making benefit payments nor in managing the pension benefit obligation, both of which are the responsibility of

public and para-public institutions in the province of Quebec. This also reduces the impact of a privacy or data breach because CDPQ does not warehouse beneficiary data.

Governance

CDPQ's governance risks are low reflecting that the pension asset manager's governance practices and risk management framework are in line with the Canadian financial services sector. CDPQ has a strategic commitment to influence stronger ESG disclosures and practices of their investment companies through its ownership interests.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moody's.com. In order to view the latest scores, please click [here](#) to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

Support and structural considerations

High expectation of extraordinary support with a mandate as the exclusive investment manager of Quebec public sector entities

Extraordinary support represents the probability that a government sponsor of a GRI would provide financial support, or other contractual protections, to a GRI to avoid a default on its debt obligations. The expectation of a continuation of ordinary support does not constitute extraordinary support and is instead considered in our assessment of the GRI's BCA.

As noted, CDPQ has special legal status as the exclusive asset manager for investments related to the social retirement programs of Quebec. We believe the pension asset manager is a key element of the province's social retirement program and therefore an important contributor to the overall economy of Quebec. In our view, a default of CDPQ would be politically embarrassing to the Province of Quebec and would have implications for the province's own ability to access debt markets. As such, we have a high assumption of extraordinary support from the Province of Quebec (Aa2 stable) to CDPQ, if necessary. Given that CDPQ's BCA is at the same level as the province, the pension asset manager's long-term issuer rating does not currently benefit from any uplift for government support.

Creditors have a material buffer against any asset value deterioration

The CDPQ reported a gross asset base of CAD474 billion at year-end 2022. Net participation deposits represented approximately 84%, CAD399 billion, of the gross asset base which, in our view, constitute loss absorbing equity because participation deposits rank junior in priority to the CDPQ's unsecured creditors, including its obligations under the guarantee of CDP Financial Inc.'s debt. Secured liabilities (including non-recourse asset level debt) representing approximately 7% of gross assets rank ahead of the CDPQ unsecured creditors. Participation deposits do not bear interest and constitute a participation of their holders in the net equity and net revenue of the fund or portfolio in which they are made. Under provincial law, the CDPQ is explicitly entitled to encumber all of the assets that it manages. CDPQ therefore effectively has a very high capitalization, which provides creditors with a material buffer against any future asset value deterioration.

Adjusting for nettable, but not offset, repurchase agreements, CDPQ's leverage ratio was 13.7% as at 31 December 2022.

Rating methodology and scorecard factors

Exhibit 9

Caisse de depot et placement du Quebec

Public Pension Manager

Caisse de depot et placement du Quebec

2022

	Historical		Assigned		Key driver #1	Key driver #2
	Factor Weights	Historic Ratio	Initial Score	Assigned Score		
Funding Ratio*						
Net Assets / PBO	45%	100.0%	aaa	aa1	Liability Opacity	
Liquidity						
Liquidity Inflows / Outflows	18%	391.3%	aaa	aaa		
Asset Quality						
High Risk Assets / Gross Assets	18%	73.2%	ba1	baa1	Asset Class Diversification	Geographic Diversification
Financial Policy						
Financial Policy	18%	aa	aa	aa		
Financial Profile Outcome	100%		aa2	aa2		
Qualitative Notching						
Political Independence				0		
Corporate Behavior				0		
Scorecard-Indicated Outcome Before Constraint				aa2		
Consideration of:					Comment	
Sovereign Constraint (Y/N)				Yes		
Sovereign Rating				Aaa		
Sponsor Constraint (Y/N)				Yes		
Sponsor Rating				Aaa		
Scorecard-Indicated Outcome				aa2		

Source: Moody's Financial Metrics

Ratings

Exhibit 10

Category	Moody's Rating
CAISSE DE DEPOT ET PLACEMENT DU QUEBEC	
Outlook	Stable
Baseline Credit Assessment	aa2
Issuer Rating -Dom Curr	Aaa
CDP FINANCIAL INC.	
Outlook	Stable
Bkd Senior Unsecured	Aaa
Bkd Commercial Paper	P-1

Source: Moody's Investors Service

© 2023 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved. CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES ITS PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the credit rating process or in preparing its Publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$5,000,000. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moody's.com under the heading "Investor Relations — Corporate Governance — Charter Documents - Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657 AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY100,000 to approximately JPY550,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

REPORT NUMBER 1366192

Contacts

Robert Colangelo
VP-Sr Credit Officer
 robert.colangelo@moodys.com

+1.416.214.3847

Evan Cybart
Associate Analyst
 evan.cybart@moodys.com

+1.212.553.3981

Robert M. Callagy
Associate Managing Director
 robert.callagy@moodys.com

+1.212.553.4374

Marc R. Pinto, CFA
MD-Financial Institutions
 marc.pinto@moodys.com

+1.212.553.4352

CLIENT SERVICES

Americas 1-212-553-1653

Asia Pacific 852-3551-3077

Japan 81-3-5408-4100

EMEA 44-20-7772-5454