Criteria | Governments | International Public Finance:

Methodology And Assumptions For Analyzing The Liquidity Of Non-U.S. Local And Regional Governments And Related Entities And For Rating Their Commercial Paper Programs

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(***Editor's Note:*** *We're republishing this article following our periodic review completed on May 1, 2018. See the "Revisions And Updates" section for details.)*

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1. Standard & Poor's Ratings Services is refining and adapting its methodology and assumptions for the liquidity analysis of non-U.S. local and regional government and their related entities. We are publishing this article to help market participants better understand our approach to reviewing the liquidity of a public finance entity and assigning a rating to its commercial paper program. This article is related to our criteria article "Principles Of Credit Ratings," which we published on Feb. 16, 2011.

SCOPE OF THE CRITERIA

2. Standard & Poor's is updating its criteria on liquidity analysis for non-U.S. local and regional governments (LRGs). Liquidity is one of the eight rating factors that we assess when assigning a long-term and/or a short-term issuer credit rating to an international LRG (see "Methodology For Rating Non-U.S. Local And Regional Governments," June 30, 2014). These criteria also apply to some government-related entities (GREs) owned by LRGs, mostly in cases when the GRE's rating is closely tied to the LRG's rating under our GRE criteria (see "Rating Government-Related Entities: Methodology And Assumptions," March 25, 2015). The clarification focuses on:

- The importance of the national framework,
- Debt and liquidity policies and management practices,
- Internal cash flow generation capacity,
- External liquidity: committed bank facilities and market access,
- Liquidity stress analysis,
- The specific backup requirements for the rating of commercial paper (CP) programs and other short-term notes, and

- Application to some GREs owned by LRGs.

SUMMARY OF CRITERIA UPDATE

3. This article partly amends and supersedes "Analyzing Liquidity Of International Local And Regional Governments," published Nov. 6, 2008. Notable changes include:

- The addition of a section on the rating of CP programs and other short-term notes and requirements for related backup facilities;
- The extension of the scope of the criteria to cover those GREs whose ratings are closely tied to an LRG's rating.

4. These criteria do not cover other GREs for which we apply the relevant sector criteria (for example, corporate or financial institution) both with respect to liquidity analysis and the rating of CP programs. The criteria also do not cover the case of GREs related to a sovereign government.

5. This paragraph has been deleted.

6. This paragraph has been deleted.

METHODOLOGY

7. Standard & Poor's liquidity analysis for public finance entities takes into account levels of cash and readily marketable securities, committed bank lines, access to capital markets, and projected cash inflows and outflows during the year, including their seasonality and elasticity to economic performance. Furthermore, we analyze debt and liquidity management policies and risk management as well as the use of derivatives.

8. We believe the adequacy of liquid assets and cash flows is an important short-term determinant of timely debt service and consequently an important factor in assessing public finance entities' ratings. Moreover, adequate liquidity can become the main analytical issue for speculative-grade entities or in situations of systemic or market crisis.

9. Our cash flow analysis typically focuses on the coming 12 months, and includes a review of the predictability of operating cash flows, as well as the expected near-term uses of cash, including capital expenditures and debt maturities. This analysis generally assumes expectations of performance and funding access in a "normal" environment (outside severe domestic or global market disruption).

10. However, in attempting to anticipate situations when liquidity may be restricted, we perform a stress analysis under a hypothetical scenario whereby we assume access to new external funding over a three- to six-month period is interrupted, because of shrinkage in the market or significantly higher funding costs that makes it difficult for the issuer to refinance its debt.

Importance Of The National Framework

11. We analyze the liquidity and debt management of a public finance entity in the context of country-specific characteristics. This analysis is particularly important in the case of LRGs and includes considerations on the banking sector's development (including the number of banks lending to the public sector) and the development of the domestic bond market in general and LRGs' access to it in particular. Other country-specific elements may, in our view, influence LRGs'

liquidity management and investment policies, such as legislation encouraging or discouraging cash holding, special access to liquidity from the central government or other sources, or legislation on the use of derivative instruments.

12. We have observed that in many countries LRGs try to minimize their cash positions since opportunities to invest the funds and earn interest are limited by law. This policy is generally compatible with high investment-grade ratings, as long as the LRGs have strong monitoring and reporting systems and readily accessible liquidity facilities, and operate in a country with a mature and deep capital market.

13. As a result, our analysis of each LRG's setup, policy, and ratios is designed to account for the particular national context, which calls for a qualitative analysis alongside a quantitative analysis of ratios, numbers, and trends.

Debt And Liquidity Policies And Management Practices

14. In terms of management, we focus on the relevance of debt and liquidity management policies and resulting risk appetite, as well as on the efficacy of the entity's risk management practices.

15. In assessing an issuer's ability to manage liquidity , we analyze their degree of understanding of risks relating to debt and liquidity, the existence and application of proper internal guidelines and limit setting, the level of monitoring and reporting, and the quality of operational management, including some considerations regarding personnel qualification and sophistication.

16. Issuers that we rate at the highest levels would generally provide detailed documentation on the sources of their liquidity risk and how they expect liquidity to fluctuate in stress scenarios, as well as policies on the management of liquidity and the limitation of related risks, such as maximum exposure to interest rate risk or currency fluctuation.

17. The most basic risk management procedures we observe are typically those designed to ensure that transactions have been authorized and are consistent with national laws and policies. Risks can, in our view, arise in the case of an unclear delegation of responsibilities, the concentration of debt and liquidity management on a small number of individuals ("one-man risk"), or improper governance. In some emerging markets, the debt repayment culture is an important consideration, as we have observed some delays of payment resulting from the low importance that management assigns to the timely payment of debt.

18. As part of our credit analysis, we discuss with issuers how they manage the factors cited above and the controls and procedures they have implemented. However, we do not audit or validate an entity's compliance with externally or internally imposed regulations.

Internal Cash Flow Generation Capacity

Cash flow analysis

19. Our cash flow analysis consists of a forward-looking assessment of an issuer's average and minimum cash reserves, internal cash flow generation capacity, and access to external sources of funding, all relative to debt service and other cash outflows.

20. It includes an analysis of the seasonality of cash inflows and outflows and potential mismatches, as well as how operating expenses are covered and when and how the entity expects to finance capital expenditure programs. In analyzing an issuer's cash flows and cash position, we believe it is important to study trends; we seek to evaluate seasonal/intra-year patterns in order to track when during the year liquidity requirements are likely to peak and to estimate the size of the peak.

21. We also analyze levels and flows of working capital. These factors can, in our experience, provide an early warning of weakening liquidity. An increase in receivables outstanding can indicate liquidity problems deriving from tax collection inefficiency, significant delays in the payment of transfers from higher levels of government, or signs of economic stress. Similarly, an increase in an entity's payables may also signal liquidity pressure resulting in delayed payments to suppliers.

22. Our cash flow analysis typically focuses on the coming 12 months, but debt maturing just beyond this horizon is also taken into account. We evaluate whether financing/refinancing needs occurring within the next three to six months have coverage in place or whether the LRG has a credible strategy to cover them. The exact time horizon may vary for each issuer and is based on considerations such as the issuer's credit quality, refinancing needs, and market access.

23. For issuers with a significant amount of debt to be rolled over or refinanced, we focus our analysis on the entity's refinancing policy, debt maturity profile, committed facilities, and ability to access particular markets to refinance maturing debt. In our view, a heavy reliance on short-term debt or a debt portfolio with an irregular maturity profile can pose significant risk in the absence of credible refinancing options. Such reliance may be acceptable for credit purposes in very liquid and mature markets under "normal" circumstances but is much riskier in emerging countries or in cases of severe market turbulence.

Free cash and liquid assets

24. We define "free cash and liquid assets" as assets that are:

- Unrestricted (unencumbered by loan agreements and not earmarked for special purposes),
- Not needed to meet daily operating needs or planned capital costs, and
- Available to cover debt service.
- Free cash and liquid assets generally include term deposits, subject to the following: (i) if the term deposits are unconditionally and immediately breakable without prior notice, they are included net of the breakage fee; (ii) otherwise, they are included only if both of the following conditions are met: The maturity of the term deposit is earlier or equal to the maturity of the debt included in the denominator of the debt service coverage ratio, and operational risks are managed/mitigated.

25. Therefore, assets available for liquidity support typically are those sums not required for daily ongoing obligations.

26. In light of the cyclical nature of liquidity reserves, we assess "free cash and liquid assets" as the most recently reported amounts of unrestricted cash adjusted as necessary for working capital needs as well as for expected net cash flows from operating and capital activities. In other words, we try to evaluate, in a forward-looking manner, the portion of the liquidity

reserves that is available to repay debt in the next three to six months.

27. When a portion of these assets is in the form of noncash investments, we believe it is important that they be highly liquid and immediately saleable through the existence of a deep secondary market or a major stock exchange in the case of equity holdings. For this reason, an investment in the form of a private placement loan, real estate, or a majority stake in a company would not be given credit in our liquidity analysis, but would be factored into our flexibility analysis.

28. In our measure of free cash and liquid assets, we generally apply a discount to the market value of fixed-income securities and equities to reflect potential volatility due to interest rate, liquidity, currency, and share price risk. The degree of this "haircut" applied for each asset class is outlined in the "Assumptions" section below. We would also analyze whether in our view the marketable securities pose concentration risk (with regard to issuer/stock, sector, country, and currency risk).

29. We would view strong internal cash flow generation capacity as characterized by predictable cash inflows and outflows, with a relatively good match over the year, well covered financing/refinancing needs, and a comfortable level of reserves in the form of free cash and liquid assets. The weakest characteristics would include highly volatile cash flows, with significant mismatches during the year, and a lumpy debt amortization profile. Weak characteristics also include high financing/refinancing risks for which only partial coverage is in place and low or volatile free cash and liquid assets.

External Liquidity: Committed Facilities And Market Access

30. We generally regard cash and liquid assets as the strongest form of liquidity. However, many issuers rely on committed bank facilities for their financing and liquidity management; in cases of exceptionally good market access, we may also consider this as an alternative form of liquidity. In countries where access to the capital markets is not very well developed for public finance entities, or in the case of market turbulence, we would view more favorably in our credit analysis, the existence of cash and liquid assets, rather than committed bank facilities and market access.

Committed bank facilities

31. Although committed bank facilities may provide a sense of security, backup facilities do not guarantee that liquidity will always be available. For example, an issuer could be denied funds if its banks invoked material adverse change (MAC) or market disruption clauses. Alternatively, an issuer in trouble might draw down its credit line to fund other cash needs, leaving less than full coverage for debt outstanding.

32. When analyzing the quality of a bank facility, we would generally analyze various factors that we believe may affect the degree of the bank's commitment to advance cash under all circumstances. In particular, we analyze:

- The existence of written documentation;
- The expiration date of such lines and the notification period in case of nonrenewal;
- Current and expected usage of the line, and its potential dedication to the coverage of a specific debt instrument;

- Timely availability (same-day notification rather than two-day or longer);
- Credit quality of the facility banks;
- The number of banks providing these facilities (to measure reliance on one or few banks);
- Nature of bank ownership (private or government-owned) for the bank providing the facility; and
- Existence of covenants and rating triggers and the likelihood of covenants being breached.

33. We believe that in the absence of a written contractual commitment, payment for the facility--whether by fee or maintenance of credit balances--may create a degree of "moral commitment" on the part of the bank to provide the facility in case of market disruption, especially if the issuer has a long and well-established relationship with that institution. However, in such a situation, the issuer is exposed to a potential significant increase in the cost of this facility. As a general rule, for investment-grade issuers, we would expect the bank facilities to be provided by banks rated in the investment-grade category.

34. Standard & Poor's observes that liquidity facilities often include MAC clauses and sometimes market disruption clauses, allowing the bank to withdraw from its funding obligation under certain circumstances. While inclusion of escape clauses weakens the commitment, Standard & Poor's does not consider it critical--or realistic--for borrowers in certain markets to negotiate removal of MAC clauses. Nevertheless, when in our opinion, liquidity facilities are material for the rating, Standard & Poor's generally would request copies of all liquidity facilities' documentation and would evaluate the wording of MAC clauses and financial covenants, the likelihood of occurrence of the events that could cause the line to be terminated, and the effect of the clauses on the bank's commitment. If a backup facility contains a rating trigger, we would consider such an inclusion to be a negative factor as it creates the risk of a "credit cliff" for the rating.

35. In all circumstances, we analyze the extent of the issuer's dependence on a single backup facility for its upcoming liquidity needs; we view access to diversified sources of funding as a positive factor in our rating analysis.

36. An LRG's reliance for liquidity lines on a bank that the LRG itself owns may be a positive factor for the rating, especially if the bank has access to the central bank discount window, as in our opinion, the bank will more likely be willing to provide funds to the LRG if it has the ability to do so. However, this situation can also be a negative factor in our analysis, as in a troubled market, the bank could experience problems with the consequence that the LRG might not be able to access either its lines or even its deposits without destabilizing the institution. Furthermore, the bank rating may be highly correlated with the government rating, so in the case of LRG stress, the bank itself may not have access to liquidity either.

37. The quality of committed facilities, assessed by the implied degree of commitment of the bank(s) to make payment under all circumstances, is particularly important for issuers that have a large amount of confidence-sensitive paper maturing in the short term (see section "The Rating Of CP Programs Or Other Short-Term Notes And Related Backup Facilities,") and/or when an entity has limited own liquid reserves and relies on bank facilities for its liquidity management.

Access to market funding

38. Standard & Poor's observes that market funding (bank loans, bonds, and CP) can be an important source of financing, particularly in countries with liquid and mature bank or capital

markets. In "normal" circumstances, we would usually credit an entity's ability to access external funding as part of our liquidity analysis, the depth and stability of the market permitting. Circumstances of significant market stress are addressed in the following section. In some countries, like Germany and Canada, LRGs rely largely on a well-developed capital market for their funding, while in most other countries, public finance entities rely mostly on bank loans.

39. We believe that capital markets reliance is predicated on a mature, deep, liquid, and well-functioning domestic or regional market. Important features for safeguarding good market access include, for instance, regular bond auctions, a well-functioning exchange trading or market maker structure, reliable technology and systems for capturing trading information, and membership of a settlement system such as Euroclear. On the legal side, consistent, transparent, and comprehensive regulatory systems and standardized templates for documentation of bonds and other instruments are in our view important factors.

40. In addition to this general market setup, we believe that a crucial factor is whether this market for LRG-type or public finance-type issuers exhibits breadth (with a large number of investors willing to invest in LRGs' bonds, CP, etc.), and depth (large money volumes in the LRG bond market). Certain legal or regulatory features have, in our opinion, supported the development of a large LRG bond market in particular countries, for example, tax-exempt interest treatment for LRG paper or eligibility of bonds as repo-able securities by central banks with a minor discount factor.

41. We assess the degree of access we believe a particular issuer has to external funding by analyzing factors such as the number, size, and frequency of issues, the number of investors, and the size and turnover of the secondary market. German states are a typical example of issuers with broad market access; they regularly issue large amounts of debt in the market including benchmark bonds.

42. For entities that rely on the bank loan market, we first analyze the general strength and diversity of the domestic banks that are active lenders to the municipal/ public sector. We then analyze each entity's access and links to banks, noting the diversity and credit profile of those banks. A key consideration in our analysis of bank loan access is the diversity of possible sources of funds that broaden borrowing alternatives during stress periods (access to both capital and bank loan markets and available short- and long-term instruments, and diversity of financing partners).

43. In our opinion, strong market access would include characteristics such as frequent and large issuance in a very liquid capital market and with a broad and deep investor base for public sector issuers, and/or well-established relationships with several active lenders to the public sector and/or access to a variety of short-term and long-term funding instruments. Weak market access could be seen in some emerging markets, for instance, where public issuers do not have access to a well-developed capital market, while banks have a very low credit quality and only a few lend to the public sector.

Liquidity Stress Analysis

44. In situations where market turbulence or restricted access to liquidity exceed our expectations, we perform a stress analysis under a hypothetical scenario whereby we assume access to any new external funding over a three- to six-month period is interrupted. Such interruption may be a result of market problems, a deterioration of the issuer's credit quality, or because of very high funding costs, which make it difficult for the issuer to refinance its debt. This analysis is accompanied by forecasts of cash flow generation capacity under

stressed conditions, for example, under a potential decline in tax revenues and state transfers, or under growing interest costs or social expenditures. Finally, we apply more severe assumptions in terms of haircuts on marketable securities; these are presented in table 1, below.

45. In cases where this analysis evidences a potential funding gap, we ask the issuer to explain the different options it intends to implement if needed as part of its effort to ensure timely debt repayment. These options may include postponement of capital investment projects, reduction of subsidies or other operating costs, delay of payment to suppliers (a negative factor for creditworthiness), the sale of liquid assets, or access to extraordinary funds from the central government. These options not only reflect the financial and budgetary flexibility of the entity, but we believe they also serve as an important indication of management's capacity to anticipate and manage the practicalities of market turbulence. If the results of this discussion lead to a possible outcome different from that reflected in the rating, we would adjust the rating accordingly.

46. In practice, we have observed that, in several developed countries, market access has not been significantly impaired for highly rated LRG during recent periods of significant market turbulence, and some issuers even benefited from investors' "flight to quality." This was the case for instance for German states in 2008 and 2009.

The Rating Of CP Programs Or Other Short-Term Notes And Related Backup Facilities

47. CP consists of unsecured promissory notes issued to raise short-term funds. CP ratings pertain to the program established to sell such notes. Standard & Poor's does not review individual notes. Typically, only issuers of strong credit standing can sell their paper in the money market, although there is periodically some issuance of lower quality, unrated paper. Other forms of confidence-sensitive short-term notes might be issued, for instance as part of a medium-term note program.

48. The evaluation of an issuer's CP reflects our opinion of the issuer's fundamental credit quality. The analytical approach is virtually identical to the one followed in assigning a long-term issuer credit rating, and the short-term and long-term rating systems are tightly linked. Indeed, the time horizon for CP ratings is not a function of the typical 30-day life of a CP note or the one-year tenor typically used to determine which instrument gets a short-term rating in the first place.

49. This paragraph has been deleted.

50. This paragraph has been deleted.

Standard & Poor's backup policies for CP programs and confidence-sensitive short-term notes

51. Standard & Poor's generally performs the above liquidity analysis when it assigns a long-term and/or short-term issuer credit rating to an LRG or one of its related entities.

52. However, when such an entity issues a CP program or another confidence-sensitive short-term note, we deem it prudent that the issuer makes additional specific arrangements in advance for alternative sources of liquidity. This alternative, backup liquidity protects issuers from defaulting if they are unable to roll over their maturing paper with new notes. A failure to roll over could occur for example, due to a shrinkage in the overall CP market or because certain

negative factors regarding the entity make CP investors nervous.

53. Many developments affecting a single issuer or group of issuers--including adverse business conditions, a lawsuit, management changes, a rating change--could make CP investors flee the credit. Given the size of the CP market, we do not believe that backup facilities should be relied on with a high degree of confidence in the event of widespread disruption. A general disruption of CP markets could be a highly volatile scenario, under which most bank lines would represent unreliable claims on whatever cash would be made available through the banking system to support the market. We neither anticipate that such a scenario is likely, nor do we assume it will never occur.

54. To face such a potential temporary disruption or turbulence in the CP or financial markets, Standard & Poor's would generally look for specific coverage of CP and other confidence-sensitive short-term notes outstanding, in addition to conducting its general liquidity analysis.

55. Standard & Poor's generally looks for 100% coverage of CP and other short-term confidence-sensitive notes outstanding by "free cash and liquid assets" (as defined in the section "Internal Cash Flow Generation Capacity" above) and/or available committed backup facilities (the quality of backup facilities is covered in the section "External Liquidity: Committed Facilities And Market Access," above).

56. In some exceptional cases, for issuers that are rated 'A-1+' and that have very strong access to external liquidity, this coverage could be reduced to 50% or lower, provided that the first 30 days (of debt service on the CP and other short-term confidence-sensitive notes outstanding) are fully covered.

57. These exceptional cases include, for example, situations where:

- The issuer has access to liquidity or loans from the sovereign or from some government-owned bank or agency or from other levels of government, through various mechanisms defined in the national legal framework and that are expected to remain in place for the foreseeable future.
- The issuer has very strong market access that has proved to be resilient over time, including during periods of severe market turbulence (see section "External Liquidity: Committed Facilities And Market Access," above). There must be a proven track record that the issuer was able to maintain sufficient market access at all time, including in a period of severe market dislocation such as in 2008-2009.

58. We set out a list of countries that we believe have these characteristics, based on our current assumptions on capital market access, in "Appendix 2: Coverage Levels For CP Programs By Country," below.

59. As mentioned above, these exceptions are limited to issuers that have an 'A-1+' issuer short-term rating. Current credit quality is an important consideration as we believe it indicates the likelihood of an issuer losing access to funding in the CP market. A higher-rated entity is in our opinion less likely to encounter significant financial reversals and, in the event of a general contraction of the CP market, we believe the higher-rated entity would be less likely to lose investors compared with its lower rated peers.

60. We would expect issuers--even if they provide 100% backup--to ensure that the first few days of upcoming maturities are backed with excess cash or so-called swing lines that are available immediately. For example, a bank backup facility that requires two-day notification to draw down will be of no use in repaying paper maturing in the interim. The same would hold true if foreign exchange were needed and the facility required a few days to provide it. Moreover, if an entity

issuing CP in Europe were relying on a bank facility in the U.S., differences in time zones or bank holidays could prevent availability when needed.

61. We would not expect swing lines and backup lines to be dedicated to a specific debt instrument, as the coverage of a single instrument would be of limited value if the issuer is unable to meet its other obligations. So long as the bank(s) providing the facilities are investment grade, we would not expect them to necessarily be rated at the same level as the issuer's CP program. However, we would view negatively in our rating analysis, a highly rated issuer relying mostly on banks rated marginally investment grade.

62. It is important to note that even what we view as the strongest form of backup--a revolver with no MAC clause--does not enhance the underlying credit quality of the issue and would not lead to a higher rating than indicated by the entity's own creditworthiness. In our analysis, credit enhancement can be accomplished through a letter of credit (LOC) or another instrument that unconditionally transfers the debt obligation to a higher-rated entity.

63. The coverage levels specified above are guidelines and not mandatory requirements; greater or lower coverage might be warranted depending on the specific issuer and the circumstances. However, because of the importance of the overall liquidity analysis for any public finance issuer, failure to meet these coverage levels could have negative implications for the issuer's long- and short-term ratings.

Application To Some Government-Related Entities Owned By LRGs

64. The above methodology on liquidity analysis and CP coverage is used mostly for LRGs. However, we may also apply it for certain government-related entities (GREs) that are owned by LRGs. GREs are rated based on a combined analysis of their stand-alone credit profile, the likelihood that they will receive timely extraordinary support from their related government in case of financial distress, and the credit quality of that government.

65. As a result, if a GRE owned by an LRG issues a CP program, we will first analyze why the GRE is using this type of instrument in the context of its debt and liquidity management, as well as its ability to repay it on a "stand-alone" basis through its own available liquidity and committed facilities. As explained in the section above, we assume a scenario where the GRE would have to repay maturing CP because a rollover is not possible following, for instance, temporary turbulence in the CP market.

66. In the second stage, we assess the likelihood that the related LRG would provide timely extraordinary support to avoid default of the GRE on its CP program, if the latter does not have sufficient resources on its own to repay it under the above scenario. To evaluate this, we use our "Rating Government-Related Entities: Methodology And Assumptions," published March 25, 2015.

67. When the GRE's rating is equalized with or closely tied to the LRG's rating, this reflects our opinion that there is an "almost certain" or "extremely high" likelihood of timely support from the LRG in case of need. In such a case, we will use the methodology described in this article to assess the capacity of the LRG to provide support to the GRE on a timely basis under this very specific scenario of stress in the CP market. In other words, our assessment of the adequate level of coverage for a CP program for this type of GRE would involve a combined analysis of the liquidity situation both at the GRE and the LRG level.

68. When a GRE's rating is more closely related to its stand-alone credit profile, we would generally put more emphasis on the GRE's own capacity to repay its CP program under the above scenario, through its own available liquidity and committed facility. As a result, we would look for

coverage levels that are more in line with the guidelines established by Standard & Poor's financial institutions group if the entity is a financial institution and by Standard & Poor's corporate group if the entity is a corporate, unless there are compelling arguments that the LRG itself will provide such liquidity.

ASSUMPTIONS

Haircut applied to marketable securities to calculate "free cash and liquid assets"

69. First, Standard & Poor's assesses the securities that according to our criteria, qualify as "free cash and liquid assets," because they are highly liquid and immediately saleable through the existence of a deep secondary market or a major stock exchange in the case of equity holdings. Second, we apply a haircut to the market value of fixed-income securities and equities to reflect potential volatility due to interest rate, liquidity, foreign currency, and share price risk (see table 1).

Table 1

Haircut To Marketable Securities

Asset type	Haircut (6)
Unrestricted cash (1) (2)	0%
Government bonds/money market instruments (3)	5%
Liquid bonds/money market instruments rated investment grade (4)	30%
Liquid bonds/money market instruments rated speculative grade (5)	50%
Equities listed on a major stock exchange	50%

(1) In cases when the unrestricted cash is placed in a bank with a short-term rating below 'A-3', we would apply a 30% to 50% haircut, depending on the situation. In emerging contries, we apply the same haircut if the cash is placed with an unrated bank (by any rating agency) or with a bank that has a long-term rating lower than the rating category of the LRG. This is unless cash holdings are protected under a national deposit insurance system. (2) Sinking funds, provided that they are safely invested (government bonds or bonds rated investment grade or at least at the considered LRG's rated level) and placed in a bankruptcy-remote vehicle, are directly deducted from direct debt levels. We nonetheless monitor the composition of the sinking funds as part of the rating surveillance. (3) This category includes investments in central government bonds of the country in which the LRG is located or investments in money market instruments rated on par or higher than the central government. (4) This category includes highly liquid bonds or money market instruments rated investment grade, or, for LRGs with a speculative-grade rating, instruments rated in the same rating category as the LRG. (5) This category includes highly liquid bonds or money market instruments rated speculative grade, or, for LRGs with a speculative grade rating, instruments rated lower than the LRG's rating category down to the 'B' category. (6) Calculated based on the latest available market value.

70. The haircut ratios specified in table 1 depend on the identified assets' characteristics and the issuer's credit quality. We use fairly general categories that do not reflect aspects such as length to maturity, coupon structure, or currency risk, mainly because of the great diversity of situations that LRGs in different markets worldwide experience, which we believe make impractical the definition of more granular guidelines that could apply internationally. To compensate for this lack of granularity, the haircut ratios are set at what we believe are conservative levels.

71. Furthermore, we observe that a large majority of LRGs rated internationally (outside a few countries like Australia, Canada, or Switzerland) do not hold significant noncash investments, either because of generally low liquidity levels or because of restrictive investment guidelines set in national regulations. In cases where the level and composition of noncash investments may have a significant impact on an LRG's rating level, we may perform a more granular analysis of the investment portfolio.

APPENDIXES

Appendix 1. Key Liquidity Ratios For International Local And Regional Governments

72. The key quantitative indicators that assist our analysis of liquidity risk are:

- Free cash and liquid assets as a percentage of debt service.
- Free cash and liquid assets and committed facilities as a percentage of debt service.
- Debt maturing within 12 months as a percentage of free cash and liquid assets and committed facilities.

73. Other ratios of interest include:

- Free cash and liquid assets as a percentage of operating expenditures.
- Cash operating surplus (before interest) as a multiple of interest expenditures.
- Payables as a percentage of total expenditures.
- Receivables as a percentage of total revenues.

Appendix 2. Coverage Levels For CP Programs By Country

74. In application of the above methodology, we have presented in table 2 the minimum level of coverage that we would typically expect for LRGs issuing short-term instruments such as CP programs in each country. These levels are based on our current assumptions in terms of capital market access for LRGs, supported by the track record during 2008 and 2009.

Table 2

Coverage Levels For CP Programs By Country

Country	Issuer type	Coverage*	Rationale for exception
France	All LRGs	100% of total outstanding	N/A
Spain	All LRGs	100% of total outstanding	N/A
Belgium	All LRGs	100% of total outstanding	N/A
Sweden	LRGs with 'A-1+' short-term rating	50% of total outstanding and 100% of first 30 days due	1. Demonstrated broad capital market access
	Other LRGs	100% of total outstanding	N/A
Australia	LRGs with 'A-1+' short-term rating	50% of total outstanding and 100% of first 30 days due	1. Demonstrated broad capital market access
	Other LRGs	100% of total outstanding	N/A

Table 2

Coverage Levels For CP Programs By Country (cont.)

Country	Issuer type	Coverage*	Rationale for exception
New Zealand	LRGs with 'A-1+' short-term rating	50% of total outstanding and 100% of first 30 days due	1. Demonstrated broad capital market access
	Other LRGs	100% of total outstanding	N/A
Germany	LRGs with 'A-1+' short-term rating	100% of first 30 days due	1. Demonstrated broad capital market access 2. Intraday lending from Deutsche Bundesbank + voluntary liquidity exchange mechanisms between states and federal government + ownership of landesbanken, which can refinance themselves at the central bank
	Other LRGs	100% of total outstanding	N/A
Canada	LRGs with 'A-1+' short-term rating	100% of first 30 days due	1. Demonstrated broad capital market access 2. Access to central bank lending
	Other LRGs	100% of total outstanding	N/A
Norway	LRGs with 'A-1+' short-term rating	50% of total outstanding and 100% of first 30 days due	1. Demonstrated broad capital market access
	Other LRGs	100% of total outstanding	N/A

*Coverage of CP or other confidence-sensitive short-term notes outstanding by available committed facilities and "free cash and liquid assets." N/A--Not applicable. LRGs--Local and regional governments.

REVISIONS AND UPDATES

This article was originally published on Oct. 15, 2009.

Changes introduced after original publication:

- Following our periodic review completed on May 2, 2017, we updated the contact information and criteria references, removed obsolete text, and clarified the coverage levels of CP programs in Norway and the treatment of term deposits in our analysis of free cash and liquid assets.
- We republished the article on July 31, 2017, to remove the chart describing the correlation of our long-term ratings with our short-term ratings, which was superseded by the article titled "General Criteria: Methodology For Linking Long-Term And Short-Term Ratings," published on April 7, 2017, as well as related obsolete text.
- Following our periodic review completed on May 1, 2018, we updated criteria references.

This article has also been partially superseded by "Methodology For Rating Non-U.S. Local And Regional Governments," published on June 30, 2014.

RELATED CRITERIA AND RESEARCH

Superseded Criteria

- Analyzing Liquidity Of International Local And Regional Governments, Nov. 6, 2008
- A Framework For International Airport Ratings, Aug. 27, 2003

Related Criteria

- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- Government-Related Entities: Methodology And Assumptions, March 25, 2015
- Methodology For Rating Non-U.S. Local And Regional Governments, June 30, 2014
- Principles Of Credit Ratings, Feb. 16, 2011

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