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THE SDR INTEREST RATE BASKET—PROPOSED CHANGE OF THE REPRESENTATIVE INTEREST RATE FOR THE EURO AND AMENDMENT TO RULE T-1(C)

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- The **Staff Report** on The SDR Interest Rate Basket—Proposed Change of the Representative Interest Rate for the Euro and Amendment to Rule T-1(C), prepared by IMF staff and completed on December 15, 2014 for the Executive Board's consideration.
- A **Press Release** summarizing the approved change to IMF operations.

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THE SDR INTEREST RATE BASKET—PROPOSED CHANGE OF THE REPRESENTATIVE INTEREST RATE FOR THE EURO AND AMENDMENT TO RULE T-1 (C)

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INTRODUCTION

1. **The three-month Eurepo interest rate, the euro component of the SDR interest rate basket, will be discontinued as of the end of 2014.** The three-month Eurepo rate, administered by the European Money Market Institute (EMMI), has been the representative interest rate instrument of the euro area in the SDR interest rate basket since 2006. However, faced with a significant shrinking in the number of banks participating in the rate-setting panel,[1] the EMMI announced last month that the Eurepo interest rate will be discontinued after December 31, 2014.[2]

2. **This paper proposes to replace the three-month Eurepo rate in the SDR interest rate basket with a transactions-based three-month interest rate.** Staff has consulted with the European Central Bank (ECB), which recommends to replace the Eurepo rate with a three-month spot rate derived from the secondary market yield curve covering euro area government bonds rated either investment grade or AA and above.[3] In staff's view, the latter option (AA and above) would be most comparable to the other instruments in the SDR interest rate basket and would have characteristics that are most consistent with previous Board guidance for selection of financial instruments in the SDR basket. The proposed change would be implemented by an amendment to Rule T-1(c), requiring a 70 percent majority of the total voting power.[4]

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[1] The Eurepo contributing panel has now shrunk to 9 panel banks from 35 banks contributing in April 2011.

[2] See http://www.emmi-benchmarks.eu/.

[3] The ECB's rating cut offs are based on ratings by Fitch.

[4] The change in the instrument for the euro constitutes a change in the determination of the SDR interest rate in accordance with Article XX, Section 3 of the Articles of Agreement, which requires a 70 percent majority of the total voting power. As any amendment to the Rules and Regulations, it would be submitted to the Board of Governors for review at their next regular meeting (Section 16 of By-laws).

SDR INTEREST RATE GUIDANCE AND ECB PROPOSAL FOR REPLACEMENT OF THE EUREPO RATE

3. The Executive Board has previously agreed that the financial instruments in the SDR interest rate basket should:[5]

- be broadly representative of the range of financial instruments that are actually available to investors in a particular currency, and the interest rate on the instrument should be responsive to changes in underlying credit conditions in the corresponding money market; and

- have risk characteristics that are similar to the official standing of the SDR itself, i.e., have a credit risk profile of the highest quality, fully comparable to that of government paper available in the market or, in the absence of appropriate official paper, comparable to the credit risk on prime financial instruments. Instruments should also reflect the actual reserve asset choice of reserve managers, for example, as regards the form of the financial instrument, its liquidity, and maturity.

4. As discussed in previous SDR valuation reviews, establishing a representative interest rate for the euro area faces several challenges. In particular, while the representative interest rate for the other instruments in the SDR interest rate basket reflect in each case a single member's sovereign instrument,[6] no comparable single euro instrument exists for the members of the euro area monetary union. Moreover, sovereign credit risks (as assessed, for example, by credit ratings agencies) vary markedly across euro area sovereigns. Given these constraints, the ECB had previously proposed using the Eurepo rate, which was considered the benchmark of choice for secured money market transactions in the euro area. Notably, following changes in its definition in 2008, the Eurepo rate was secured against the best quality collateral, principally German and French government paper, and was considered largely immune to the volatility experienced in some segments of the euro area government bond markets.[7]

5. In view of the Eurepo's imminent discontinuation, the ECB recommends replacing it with a three-month spot rate derived from a yield curve based on euro area sovereign bonds. This would align the approach adopted for the euro area with that for the other currencies in the SDR basket for which three month government bond/bill yields are used. The ECB already estimates and publishes on a daily basis two transactions-based yield curves for central government bonds of

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[5] See, for example, *Review of the Method of Valuation of the SDR* (10/26/10) http://www.imf.org/external/np/pp/eng/2010/102610.pdf.

[6] In addition to the three-month Eurepo rate, the financial instruments in the SDR interest rate basket include the three-month Japanese Treasury Discount bills rate, the three-month U.K. Treasury bills rate, and the three-month U.S. Treasury bills rate.

[7] *Review of the Method of Valuation of the SDR*, paragraph 35 http://www.imf.org/external/np/pp/eng/2010/102610.pdf.

the euro area; namely for: (i) all bonds issued in the euro area and (ii) AAA-rated bonds only.[8] [9] These yield curves are derived from yield observations based on actual trades and committed quotes that are executable for specific tenors (see Annex for details of the estimation method). For the SDR interest rate basket, the ECB recommends using the yield curve calculated based on either investment grade bonds (rated BBB- or higher), which score highly in terms of euro area representativeness, or alternatively AA and above rated bonds.[10] The ECB stands ready to publish the interest rate for the euro part of the SDR interest rate basket, as determined by the Executive Board, on a daily basis from January 1, 2015 onwards.

STAFF ASSESSMENT

6. Staff has assessed the proposal by the ECB. Notwithstanding the degree of estimation involved, staff concurs that the proposal to use the 3-month spot rate derived from a yield curve based on euro area sovereign bonds would be more in line with the approach used for the other components of the SDR interest rate basket.

7. In terms of the two options provided by the ECB, the higher-rated option would have mirrored closely the Eurepo rate and would not have materially changed the SDR interest rate. A historical comparison of the Eurepo rate and the yield for sovereign bonds rated AA and above shows that the two rates have tracked each other very closely, with an average spread of less than 2 basis points over the period January 2010—December 2014 (Figure 1a). Similarly, staff calculations suggest that the SDR interest rate calculated on the basis of the yield for sovereign bonds rated AA and above would have closely tracked the actual SDR interest rate (calculated using the Eurepo rate), with an average spread of less than one basis point over the same period (Figure 1b). By contrast, the alternative option proposed by the ECB, i.e., all bonds rated investment grade, exhibited large spikes during the euro area crisis and remained well above the Eurepo rate until very recently. This would have led to a significant increase in the SDR interest rate, which would have translated into higher borrowing costs for members with Fund credit outstanding and could have raised questions about the underlying credit quality of the SDR. More generally, the characteristics of this rate would not seem compatible with those required for SDR instruments, i.e., "credit risk profiles of the highest quality". Indeed, the risk profile of the investment grade sovereigns has most closely tracked that of "all euro area bonds", which also includes non-investment grade sovereigns (Figure 1c).

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[8] See http://www.ecb.europa.eu/stats/money/yc/html/index.en.html.

[9] AAA-rated sovereigns used by the ECB in the estimation of the yield curve currently comprise issuances by Austria, Finland, Germany, and the Netherlands.

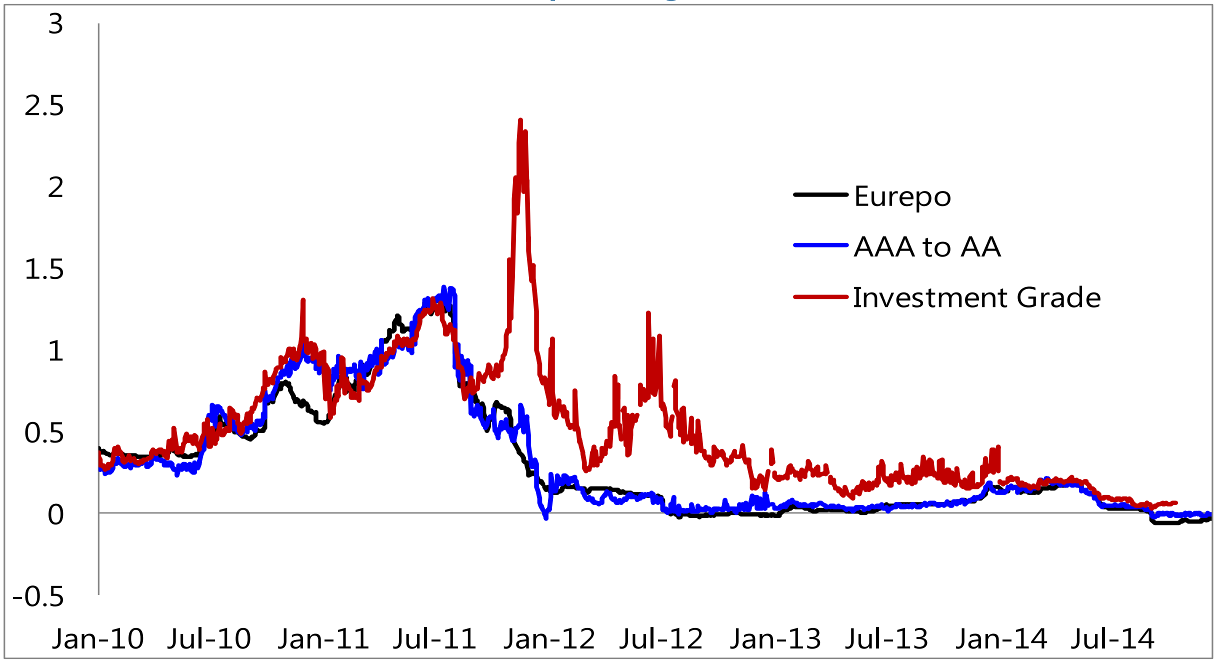
[10] The AA and above grouping currently includes all AAA-rated sovereigns plus Belgium and France. The investment grade grouping (BBB- and above) currently includes, in addition to the sovereigns rated AA and above, also Ireland, Italy, Malta, Slovakia, Slovenia, and Spain. For the other components of the SDR interest rate basket, current Fitch ratings are A+ for 3-month Japanese Treasury Discount bills, AA+ for 3-month UK Treasury bills, and AAA for 3-month US Treasury bills.

8. In light of these considerations, staff proposes that the Eurepo be replaced by the 3-month euro rate derived from a yield curve based on euro area sovereign bonds rated AA and above, as calculated and published by the ECB. This rate is broadly representative of the range of financial instruments that are actually available to investors in the euro area, and yields an interest rate that is responsive to changes in underlying credit conditions. Moreover, staff contacts with reserve managers and other market participants indicate that the risk profile, including the proposed AA and above credit rating, is similar to a credit risk profile of the highest quality instruments available in the market and reflective of actual reserve asset choices of reserve managers. In light of the historic behavior of the proposed new rate and its very small spread vis-à-vis the Eurepo, the adoption of the proposed three-month euro yield should result in a smooth transition between euro area instruments in the SDR interest rate basket.[11] A full review of the interest rate instruments in the SDR basket will be undertaken in 2015 in the context of the quinquennial review of the method of valuation of the SDR.

9. If the attached decision is approved by the Executive Board, the proposed 3-month euro rate will replace the Eurepo rate effective January 1, 2015.

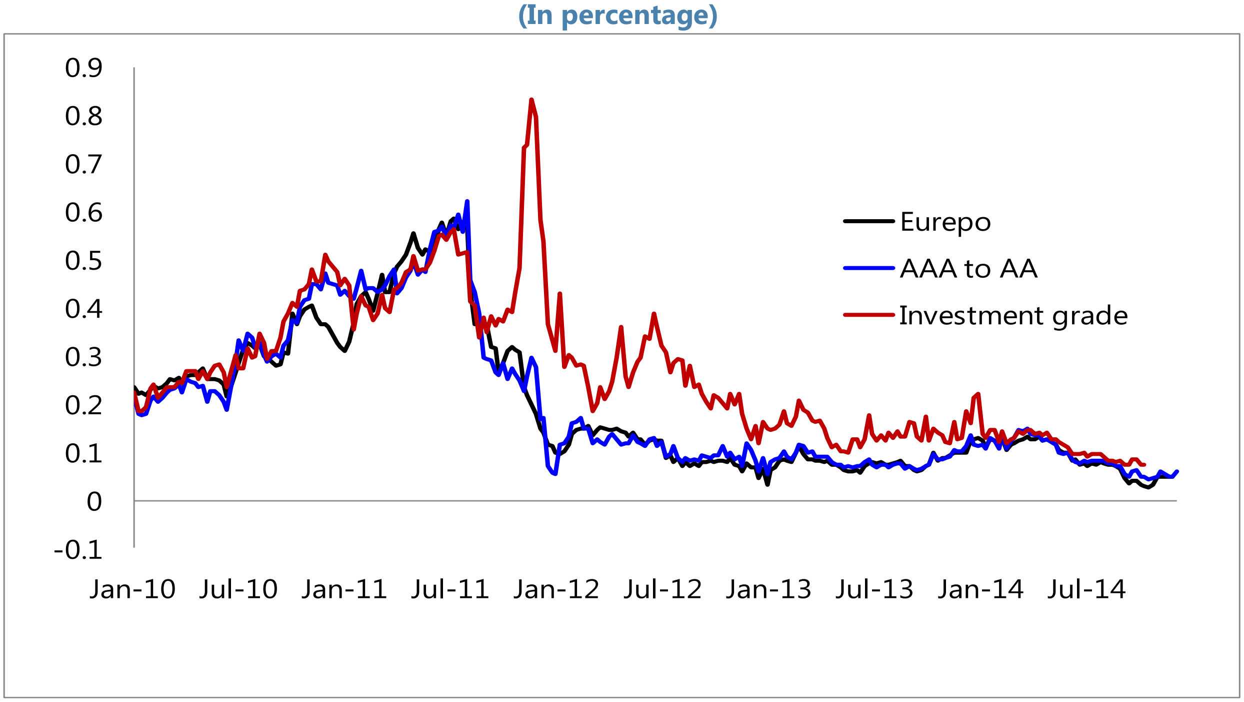
[11] For the most recent data (December 8), the weighted average of the SDR interest rate components would be about one basis point higher using the proposed new euro yield than that based on the Eurepo rate.

Figure 1a. Comparison of 3 month rates: Eurepo, ECB AAA to AA, and Investment grade
Jan. 2010–Dec. 2014
(In percentage)



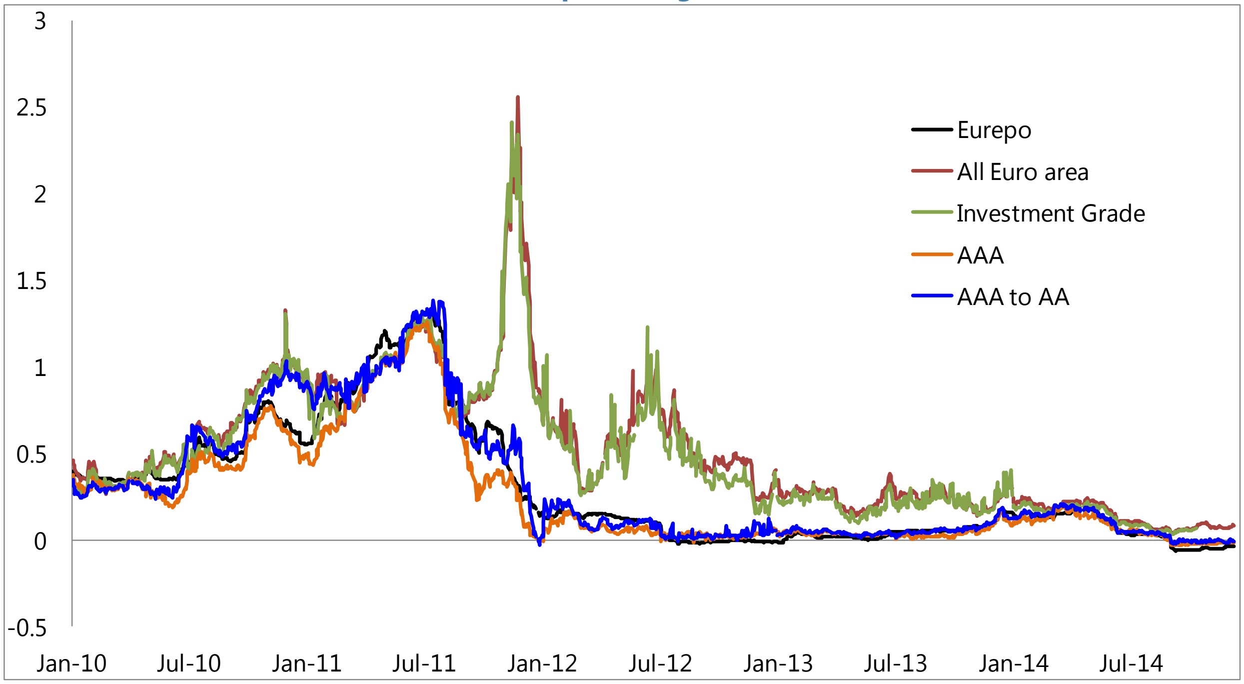
Source: ECB and IMF staff estimates.

Figure 1b. Comparison of SDR interest rate—Actual, AAA to AA, and Investment grade
Jan. 2010–Dec. 2014
(In percentage)



Source: ECB and IMF staff estimates.

Figure 1c. Comparison of 3-month rates: Eurepo and ECB derived curves
Jan. 2010–Dec. 2014
(In percentage)



Source: ECB and IMF staff estimates.

Proposed Decision

The following decision, which may be adopted by a 70 percent majority of the total voting power, is proposed for adoption by the Executive Board:

Effective January 1, 2015, Rule T-1(c) shall be amended by replacing "Three-month Eurepo Rate" with the "Three-month spot rate for euro area central government bonds with a rating of AA and above published by the European Central Bank ."

Annex. The ECB's Yield Curve Methodology

The ECB estimates zero-coupon yield curves for the euro area. A zero coupon bond is a bond that pays no coupon and is sold at a discount from its face value. The zero coupon curve represents the yield to maturity of hypothetical zero coupon bonds. Since these zero coupon bonds are not directly observable in the market for a wide range of maturities, they must therefore be estimated from existing zero coupon bonds and fixed coupon bond prices or yields.

The estimation of the yield curve is done by means of a modeling algorithm (Svensson Model) that minimizes the sum of the quadratic difference between the yields that can be computed from the curve and the yields actually measured. Moreover:

- Yields are calculated, where applicable, according to the International Securities Market Association formula for a fully paid fixed coupon bond with an assumed single redemption date.
- Yield observations are based on actual trades and committed quotes that are executable for specific tenors.
- Differences in original or residual maturity are interpolated to arrive at the specific, desired tenor.
- Calculations used to derive cash flows are based on settlement dates according to individual bond market practices.
- The day count calculations are performed using market practices such as Actual/360, Actual/Actual or are based on 30E/360 depending on the type of bonds and the residency of the issuer.
- No adjustments for tax or coupon effects are made.
- The previous TARGET day parameter values are used as the starting values for the next TARGET day calculations.[12]

For the estimation, bonds are selected according to the following criteria:

- Only bonds issued in euro by euro area central government (European System of Accounts 1995: sector code 'S.1311') are selected.
- Only bonds with an outstanding amount of at least €5 billion are included.
- Bonds with special features, including ones with specific institutional arrangements are excluded.

[12] See Technical background notes at http://www.ecb.europa.eu/stats/money/yc/html/index.en.html for more details.

- Only fixed coupon bonds with a finite maturity and zero coupon bonds are selected, including STRIPS. Variable coupon bonds, including inflation-linked bonds, and perpetual bonds, are not included.

- Only actively traded central government bonds with a maximum bid-ask spread per quote of three basis points are selected. The prices/yields are those at close of market on the reference day.

- In order to reflect a sufficient market depth, the residual maturity brackets have been fixed as ranging from three months up to and including 30 years of residual maturity.

- An outlier removal mechanism is applied to bonds that have passed the above selection criteria. Bonds are removed if their yields deviate by more than twice the standard deviation from the average yield in the same maturity bracket. Afterwards, the same procedure is repeated.

Bond and price information are provided by EuroMTS Ltd (www.euromts-ltd.com), whereas the ratings are provided by Fitch Ratings (www.fitchratings.com).

INTERNATIONAL MONETARY FUND
COMMUNICATIONS DEPARTMENT

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International Monetary Fund
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IMF Executive Board Modifies SDR Interest Rate Basket

On December 22, 2014, the Executive Board of the International Monetary Fund (IMF) decided to replace the three-month Eurepo rate as the euro component of the SDR interest basket with the three-month spot rate for euro area central government bonds with a rating of AA and above published by the European Central Bank (click link for details about the interest rate and the estimation method). This decision was taken in view of the upcoming discontinuation of the Eurepo rate as of December 31, 2014. The change in the SDR interest rate basket will be effective as of January 1, 2015 and will apply for the first time to the calculation of the weekly SDR interest rate for the interest rate period starting on Monday January 5, 2015.

Background information:

The SDR interest rate provides the basis for calculating the interest charged to members on nonconcessional IMF loans from the IMF's general resources, the interest paid to IMF members on their remunerated creditor positions in the IMF (reserve tranche positions and claims under borrowing agreements), and the interest paid to members on their SDR holdings and charged on their SDR allocation.

The SDR interest rate is determined weekly and is based on a weighted average of representative yields or interest rates in the money markets of the SDR basket currencies, except if the weighted average falls below the floor for the SDR interest rate of 0.050 percent (5 basis points).

The three-month Eurepo rate, administered by the European Money Market Institute (EMMI), has been the representative rate for the euro component of the SDR interest rate basket since 2006. However, faced with a significant shrinking in the number of banks participating in the rate-setting panel, the EMMI announced last month that the Eurepo interest rate will be discontinued after December 31, 2014.

The new 3-month interest rate, as calculated and published by the ECB (see http://sdw.ecb.europa.eu/quickview.do?SERIES_KEY=165.YC.B.U2.EUR.4F.G_N_W.SV_C_YM.SR_3M), is derived from a yield curve based on euro area sovereign bonds rated AA and above.
For further information on the IMF's financial operations visit:
http://www.imf.org/external/pubs/ft/finop/2014/index.htm