

PART I – DISTRIBUTION INFORMATION

ITEM 1 – Distribution and Pool Performance Information.

The response to Item 1 is set forth in part herein and in part in Exhibit 99.1.

Introductory and explanatory information regarding the material terms, parties and distributions described in Exhibit 99.1 is included in the Prospectus Supplement relating to the RFMSI Mortgage Pass-Through Certificates, Series 2007-S4 (the "Certificates"), dated April 25, 2007, and related Prospectus dated April 6, 2007 (collectively, the "Prospectus"), of the RFMSI Series 2007-S4 Trust (the "Issuing Entity") filed with the Securities and Exchange Commission pursuant to Rule 424(b)(5) under the Securities Act of 1933. The following classes of Certificates were offered under the Prospectus: Class A-1, Class A-2, Class A-3, Class A-4, Class A-5, Class A-6, Class A-7, Class A-8, Class A-9, Class A-10, Class A-11, Class A-12, Class A-13, Class A-14, Class A-15, Class A-V, Class A-P, Class R-I and Class R-II, Class M-1, Class M-2 and Class M-3.

PART II – OTHER INFORMATION

ITEM 2 – Legal Proceedings

Nothing to report.

ITEM 3 – Sales of Securities and Use of Proceeds.

Nothing to report.

ITEM 4 – Defaults Upon Senior Securities.

Nothing to report.

ITEM 5 – Submission of Matters to a Vote of Security Holders.

Nothing to report.

ITEM 6 – Significant Obligor of Pool Assets.

Inapplicable.

ITEM 7 – Significant Enhancement Provider Information.

Nothing to report.

ITEM 8 – Other Information.

Nothing to report.

ITEM 9 – Exhibits

- (a) Documents filed as part of this report.

Exhibit 99.1 September 2007 Monthly Statement to Certificateholders

- (b) Exhibits required by Form 10-D and Item 601 of Regulation S-K.

Exhibit 10.1 Series Supplement, dated as of April 1, 2007, to the Standard Terms of Pooling and Servicing Agreement, dated as of April 1, 2007, among Residential Funding Mortgage Securities I, Inc., as company, Residential Funding Company, LLC, as master servicer, and Deutsche Bank Trust Company Americas, as trustee (incorporated by reference to the exhibit with the same numerical designation included in the Report on Form 8-K filed by the Issuing Entity with the Securities and Exchange Commission on May 11, 2007).

Exhibit 10.2 Assignment and Assumption Agreement, dated as of April 27, 2007, between Residential Funding Company, LLC and Residential Funding Mortgage Securities I, Inc. (incorporated by reference to the exhibit with the same numerical designation included in the Report on Form 8-K filed by the Issuing Entity with the Securities and Exchange Commission on May 11, 2007).

Exhibit 10.3 Confirmation, dated as of April 27, 2007 between The Royal Bank of Scotland plc and Deutsche Bank Trust Company Americas, as trustee on behalf of the RFMSI Series 2007-S4 Trust (incorporated by reference to the exhibit with the same numerical designation included in the Report on Form 8-K filed by the Issuing Entity with the Securities and Exchange Commission on May 11, 2007).

Exhibit 99.1 September 2007 Monthly Statement to Certificateholders

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Dated: September 25, 2007

RFMSI Series 2007-S4 Trust
(Issuing entity)

By: Residential Funding Company, LLC, as Master
Servicer

By: /s/ Darsi Meyer
Name: Darsi Meyer
Title: Director

EXHIBIT 99.1 -- MONTHLY STATEMENT TO CERTIFICATEHOLDERS