

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

FORM 10-D

**ASSET-BACKED ISSUER
Distribution Report Pursuant to Section 13 or 15(d) of
the Securities Exchange Act of 1934**

For the monthly distribution period from August 1, 2006 to August 31, 2006

Commission File Number of issuing entity: 333-131201-01

RFMSI Series 2006-S4 Trust

(Exact name of issuing entity as specified in its charter)

Commission File Number of depositor: 333-131201

Residential Funding Mortgage Securities I, Inc.

(Exact name of depositor as specified in its charter)

Residential Funding Corporation

(Exact name of sponsor as specified in its charter)

New York

(State or other jurisdiction of incorporation or
organization of the issuing entity)

None

(I.R.S. Employer Identification No.)

c/o Residential Funding Corporation, as Master Servicer
8400 Normandale Lake Boulevard
Minneapolis, Minnesota 55437

(Address of principal executive offices of
issuing entity)

55437

(Zip Code)

(952) 857-7000

(Telephone number, including area code)

N/A

(Former name, former address, if changed since last report)

Title of Class	Registered/reported pursuant to (check one)			Name of exchange (If Section 12(b))
	Section 12(b)	Section 12(g)	Section 15(d)	
Mortgage Pass-Through Certificates, Series 2006-S4, in the classes specified herein	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes X No ☐

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 2006-S4 (the "Certificates"), dated April 25, 2006, and related Prospectus dated April 10, 2006 (collectively, the "Prospectus"), of the RFMSI Series 2006-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-V, Class A-P, Class R-I, 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 2006 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, 2006, to the Standard Terms of Pooling and Servicing Agreement, dated as of January 1, 2006, among Residential Funding Mortgage Securities I, Inc., as company, Residential Funding Corporation, as master servicer, and U.S. Bank National Association, 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 12, 2006).

Exhibit 10.2 Assignment and Assumption Agreement, dated as of April 27, 2006, between Residential Funding Corporation 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 12, 2006).

Exhibit 99.1 September 2006 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, 2006

RFMSI Series 2006-S4 Trust
(Issuing entity)

By: Residential Funding Corporation, as Master Servicer

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

EXHIBIT 99.1 -- MONTHLY STATEMENT TO CERTIFICATEHOLDERS