UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM 11-K

(Mark one)

x ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2010

or

o TRANSITION REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to

Commission file number 1-14023

A. Full title of the plan and address of the plan, if different from that of the issuer named below:

B. Name of issuer of the securities held pursuant to the plan and the address of its principal executive office:

Corporate Office Properties Trust

6711 Columbia Gateway Drive, Suite 300

Columbia, Maryland 21046

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* Other supplemental schedules required by 29 CFR 2520.103-10 of the Department of Labor s Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974, as amended, have been omitted because they are not applicable.

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Report of Independent Registered Public Accounting Firm

To the Participants and Administrator of the

Corporate Office Properties, L.P. Employee Retirement Savings Plan

In our opinion, the accompanying statements of net assets available for benefits and the related statement of changes in net assets available for benefits present fairly, in all material respects, the net assets available for benefits of the Corporate Office Properties, L.P. Employee Retirement Savings Plan (the Plan) at December 31, 2010 and 2009, and the changes in net assets available for benefits for the year ended December 31, 2010 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Plan s management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

Our audits were conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental Schedule of Assets (Held at End of Year) is presented for the purpose of additional analysis and is not a required part of the basic financial statements but is supplementary information required by the Department of Labor s Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. This supplemental schedule is the responsibility of the Plan s management. The supplemental schedule has been subjected to the auditing procedures applied in the audits of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

/s/ PricewaterhouseCoopers LLP

Baltimore, Maryland

June 23, 2011

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Corporate Office Properties, L.P. Employee Retirement Savings Plan

Statements of Net Assets Available for Benefits

	December 31, 2010	December 31, 2009
Assets		
Investments, at fair value		
Mutual funds	$ 19,833,593	$ 14,197,694
Common/collective fund	656,585	1,002,549
Corporate Office Properties Trust common shares	1,231,135	1,053,532
Total investments, at fair value	21,721,313	16,253,775
Receivables		
Notes receivable from participants	551,724	274,272
Employer contribution	21,593	27,664
Total receivables	573,317	301,936
Total assets	22,294,630	16,555,711
Adjustment to contract value		
Adjustment from fair value to contract value for fully benefit-responsive investment contracts	(23,732)	(30,106)
Net assets available for benefits	$ 22,270,898	$ 16,525,605

See accompanying notes to financial statements.

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Corporate Office Properties, L.P. Employee Retirement Savings Plan

Statement of Changes in Net Assets Available for Benefits

Year Ended December 31, 2010

Additions		
Investment income		
Interest and dividend income from investments	$	453,102
Net appreciation in fair value of investments		2,414,417
Total investment income		2,867,519
Interest income on notes receivable from participants		22,641
Contributions		
Employee		2,323,334
Employer		1,012,685
Rollovers		140,467
Total contributions		3,476,486
Total additions		6,366,646
Deductions		
Benefits paid		618,302
Administrative expenses		3,051
Total deductions		621,353
Net increase		5,745,293
Net assets available for benefits		
Beginning of year		16,525,605
End of year	$	22,270,898

See accompanying notes to financial statements.

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Corporate Office Properties, L.P. Employee Retirement Savings Plan

Notes to Financial Statements

1. Description of Plan

The following description of the Corporate Office Properties, L.P. Employee Retirement Savings Plan (the Plan) provides only general information. Participants should refer to the Plan document or summary plan description for a more complete description of the Plan s provisions.

General

Corporate Office Properties, L.P. (the Company), which conducts almost all of Corporate Office Properties Trust s operations and of which Corporate Office Properties Trust is the sole general partner, maintains the Plan for the benefit of the Company s employees, as well as of those of its qualifying subsidiaries, who have completed at least 60 days of employment and are at least 21 years of age. Employees automatically enter the Plan as participants on the first day of the month that coincides with or next follows the date when they become eligible to enter the Plan unless they make an affirmative election to not participate. The Plan is a defined contribution pension plan intended to be qualified under section 401(a) of the Internal Revenue Code of 1986, as amended (the IRC), and is subject to the provisions of the Employee Retirement Income Security Act of 1974, as amended (ERISA). The Company serves as the Plan administrator and T. Rowe Price Trust Company is the Trustee for the Plan.

Contributions

Participants may contribute up to 90% of their compensation, as defined in the Plan, per pay period on a before-tax basis or after-tax basis, or a combination of both, subject to limitations under the IRC. Participants who are 50 years of age or older by the end of a particular plan year and have contributed the maximum 401(k) deferral amount allowed under the Plan for that year are eligible to contribute an additional portion of their annual compensation on a before-tax basis as catch-up contributions, up to the annual IRC limit. Participants may rollover amounts from traditional individual retirement accounts, 403(b) plans, 457 plans and other qualified retirement plans into the Plan. Participants direct the investment of their contributions into various investment options offered by the Plan. The Company matches 100% of the first 1% of pre-tax and/or after-tax contributions that participants contribute to the Plan and 50% of the next 5% in participant contributions to the Plan (representing an aggregate Company match of 3.5% on the first 6% of participant pre-tax and/or after-tax contributions to the Plan).

Participant Accounts

Each participant s account is credited with the participant s contributions, Company matching contributions and an allocation of Plan earnings (losses). Allocations are based on participant earnings or account balances, as defined in the Plan. The benefit to which a participant is entitled is the benefit that can be provided from the participant s vested account.

Vesting

Participants immediately vest in their contributions and related earnings thereon. Vesting in the Company matching contribution portion of participant accounts is based on years of continuous service. For matching contributions made subsequent to December 31, 2008, a participant is 50% vested in Company matching contributions after one year of credited service and 100% vested after two years of credited service. For matching contributions made through December 31, 2008, a participant is 30% vested in Company matching contributions after one year of credited service, 60% vested after two years of credited service and 100% vested after three years of credited service.

Notes Receivable from Participants

Participants are eligible to obtain loans from the Plan, not to exceed the lesser of $50,000 or 50% of the vested balance of the participant s account. The loans are secured by the balance in the participant s account and bear interest at rates that are commensurate with local prevailing rates, as determined by the Plan administrator. At December 31, 2010, interest rates on participant loans ranged from 4.25% to 9.25% and the maturity dates on such loans ranged from January 2011 through November 2015. Repayment of participants loan principal and interest is obtained through bi-weekly payroll deductions from such participants. If participants revoke elections applicable to such payroll deductions, the entire unpaid principal sum of the participants loan plus accrued interest and any other amounts due under the loan will become due and payable. Partial or full early repayments of participant loans are permitted at any time.

Payment of Benefits

Upon termination of service, whether by death, disability, retirement or otherwise leaving the Company and its qualifying subsidiaries, a participant may elect to receive either a lump sum amount equal to the value of the participant s

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vested interest in his or her account, or annual installments over a specified period unless such vested interest is $1,000 or less, in which case a distribution is made in a lump sum amount. Alternatively, a participant or applicable beneficiary may request that the Company make a direct transfer to another eligible retirement plan.

In the event of financial hardship (as defined by the Plan), participants may withdraw money from their Plan accounts while they are still employed. A participant cannot make elective deferral contributions to the Plan for six months after he or she takes a financial hardship distribution.

Forfeitures

Nonvested Company matching contributions are forfeited on the date a participant terminates employment with the Company or its qualifying subsidiaries. Forfeitures are available for the Company to apply against future Company contributions. Forfeited nonvested accounts totaled $0 at December 31, 2010 and $6,011 at December 31, 2009. The Plan used $15,139 in forfeited nonvested accounts during 2010 to reduce the Company s funding requirements for additional employer contributions.

Investment Options

The Plan provides 23 T. Rowe Price mutual funds and one T. Rowe Price common/collective fund in which participants may choose to invest. Participants of the Plan may also choose to invest in additional mutual funds through a self-directed brokerage service provided by T. Rowe Price. In addition, the participants of the Plan may choose to invest in Corporate Office Properties Trust s common shares.

2. Summary of Accounting Policies

Basis of Accounting

The financial statements of the Plan are prepared using the accrual basis of accounting.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and changes therein, and disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

Payment of Benefits

Benefits are recorded when paid.

Investment Valuation and Income Recognition

The Plan s investments are stated at fair value. Shares of mutual funds are valued at net asset value on the last business day of the Plan year. Shares in the T. Rowe Price Stable Asset Fund, which is a fully benefit-responsive common/collective fund, are valued at fair value with an adjustment to arrive at contract value. Contract value, which represents the contributions made under the contracts plus interest at the contract rates less withdrawals and administrative expenses, is the relevant measurement attribute for that portion of the net assets available for benefits because that is the amount participants would receive if they were to initiate permitted transactions under the terms of the Plan. Corporate Office Properties Trust s common shares are valued at the closing market price of such shares at the end of the Plan year, as reported on the New York Stock Exchange.

Purchases and sales of securities are recorded on a trade-date basis. Dividends are recorded on the ex-dividend date. Interest income is recorded on the accrual basis.

The Plan presents in the Statement of Changes in Net Assets Available for Benefits the net appreciation in the fair value of its investments, which consists of the realized and unrealized gains or losses on those investments.

Administrative Expenses

Substantially all expenses incurred in connection with administration of the Plan are paid by the Company with the exception of loan fees, which are charged against the respective participants accounts.

Recent Accounting Pronouncements

In 2010, the Plan adopted an accounting standard issued by the Financial Accounting Standards Board (FASB) that affected its reporting for notes receivable from Plan participants. The standard requires that such notes be classified as notes receivable from participants and measured at their unpaid balance plus accrued but unpaid interest. Prior to adoption of this standard, notes receivable from participants were classified as investments and measured at fair value. The provisions of the

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standard were applied retrospectively to all periods presented, resulting in the reclassification of amounts reported for December 31, 2009. The standard affected how the Plan presents notes receivable from participants on the Statements of Net Assets Available for Benefits but did not otherwise have a material effect on the Plan s financial statements.

In 2010, the Plan adopted guidance issued by the FASB that requires new disclosures and clarifications to existing disclosures pertaining to transfers in and out of Level 1 and Level 2 fair value measurements, presentation of activity within Level 3 fair value measurements and details of valuation techniques and inputs utilized. The Plan s adoption of this guidance did not have a material effect on its financial statements or disclosures.

3. Investments, at fair value

The following presents the value and number of shares held of each investment that represents five percent or more of the Plan s net assets as of the end of the respective years:

	Value of Investments at December 31,		Number of Shares Held at December 31,	
	2010	**2009**	**2010**	**2009**
Mutual funds:				
T. Rowe Price Mid-Cap Growth Fund	$ 2,200,198	$ 1,625,722	37,591	34,233
T. Rowe Price Retirement 2020 Fund	1,924,852	1,295,820	117,083	88,755
T. Rowe Price Retirement 2030 Fund	1,686,331	1,191,429	97,589	78,798
T. Rowe Price Small-Cap Value Fund	1,532,284	882,582		