Report on Escheat Fund Valuation

North Carolina Department of State Treasurer

December 31, 2016

I. Introduction and Summary Recommendations

Session Law 2015-241 amended the statutes with respect to the North Carolina Escheat Fund. Subsection (b)(12) of N.C.G.S. § 147-69.2 now contains an express statement that "[i]t is the intent of the General Assembly that the Escheat Fund provide a perpetual and sustainable source of funding for the purposes authorized by the State Constitution."

Session Law 2015-241 also created authorizing statutes for the Venture Capital Multiplier Fund within the Escheat Fund and created the following new reporting requirements (i.e., "Report on Escheat Fund Valuation"):

> *The State Treasurer shall engage a third-party professional actuary or consultant to conduct a valuation and projection of the financial status of the Escheat Fund. The associated costs for the services may be directly charged to the Escheat Fund. The State Treasurer shall communicate the valuation of the actuary or consultant in an annual report to the Governor, the Speaker of the House of Representatives, the President Pro Tempore of the Senate, and the chairs of the respective appropriations and appropriate substantive committees of each chamber. The annual report shall evaluate claims by owners upon the Escheat Fund, current and projected investment returns, and projected contributions to the Escheat Fund. In the report, the State Treasurer shall assess the status of utilizing the Escheat Fund as an endowment fund and shall recommend an annual amount available for the funding of scholarships, loans, and grants from the Fund. The annual report shall be presented no later than December 31 of each year.*

This report is made under this provision, currently codified at N.C.G.S. §§ 147-69.2(b)(12) and 147-69.2A(d).

In 2016, the Department of State Treasurer ("DST") retained Aon Hewitt Investment Consulting ("AHIC") to conduct an annual asset allocation/liability analysis of the Escheat Fund (or "Fund"). AHIC's analysis included:

1. Evaluation of the historical and projected future cash flows in and out of the Fund.
2. Projection of the Fund's administrative expenses.
3. Modeling to project future assets and liabilities in various market environments.
4. Stress testing of various key variables (e.g., total receipts into the fund, total claims paid out, principal transfers, etc.) to determine the sustainable levels of withdrawals from the Fund.
5. Evaluation of the current asset allocation of the Escheat Fund.
6. Application of AHIC capital market assumptions to project future growth and risk for the Fund based on current asset allocation.
7. Scenario analysis to test various asset allocations' risk and return impact on the Fund.

The asset allocation study will be completed in 2017 when DST staff expects to present new asset allocation policy alternatives for Treasurer Folwell's review and approval. However, AHIC's modeling is sufficiently advanced that DST is comfortable providing the following guidance and recommendations to the General Assembly:

1. The ability of the Escheat Fund to function as a perpetual and sustainable source of funding for scholarships is impacted by a large number of financial and behavioral variables.

2. Because the future course of these variables is subject to elevated uncertainty, DST believes that the Escheat Fund's financial planning should utilize conservative assumptions.

3. To achieve a high probability (i.e., 75% or greater) that the Escheat Fund will maintain its inflation-adjusted market value over the intermediate-term, principal transfers must decline relative to recent levels of appropriations (i.e., must be lower than $60 million per year).

4. DST believes that a sustainable annual principal transfer that satisfies the General Assembly's express intent is an amount between $0 and $55 million with the following trade-offs:

    a. Lower annual principal transfers lead to lower cumulative principal and interest transfers, but higher ending values after 20 years (and vice versa).

    b. Lower annual principal transfers lead to a higher total real economic value of the Escheat Fund.[1] Over 20 years, the total real economic value of the Escheat Fund would be $155 million to $268 million higher if annual principal transfers drop from the recent levels of $60 million to $0.

    c. A growth-oriented asset allocation should further improve outcomes.

5. The foregoing analysis lead DST to conclude that the General Assembly should endeavor to lower the annual principal transfers over time to the lower end of the $0 to $55 million range.

[1] The total real economic value of the Escheat Fund is defined as the present value of annual principal and interest transfers over 20 years plus the discounted ending value of the Escheat Fund at 20 years. A 2% discount rate is utilized to approximate inflation expectations and convert future dollars into today's dollars.

II. Overview of Escheat Fund

DST oversees and maintains unclaimed property for the State. By law, unclaimed property is escheated, or turned over, to DST for safekeeping. The Unclaimed Property Division ("UPD") is responsible for recovering and returning such property to all rightful owners. The administration of the UPD and the Escheat Fund is governed principally by N.C.G.S. Chapter 116B.

The unclaimed property which is turned over to DST was previously held by financial institutions, insurance companies, government agencies and other businesses, referred to as "holders", in the form of wages, utility deposits, insurance policy proceeds, and other sources of funds. Property is considered unclaimed when the apparent owner fails to communicate interest in it for a period of time called the dormancy period. Once the property has met its dormancy limit and the holder has made a good faith effort to locate an apparent owner, any funds remaining with the holder must be escheated to UPD and maintained in the Escheat Fund by directive of a 1971 state law. UPD actively seeks to locate the owners and promote public awareness of the program.

The interest earned on the Escheat Fund pays for the operating costs of the Unclaimed Property Division, and all remaining interest is sent to the State Education Assistance Authority ("SEAA"), to provide grants, loans and scholarships for North Carolina students attending public universities. Additionally, an amount specified in the annual Budget bill is transferred annually from the Escheat Fund to the Department of Administration to partially fund scholarships for Children of War Veterans for those who are worthy and needy and enrolled in North Carolina public institutions of higher education. *See* N.C.G.S. §§ 116B-6, 116B-7. Article IX, Section 10 of the State Constitution provides:

> *All property that, after June 30, 1971, shall accrue to the State from escheats, unclaimed dividends, or distributive shares of the estates of deceased persons shall be used to aid worthy and needy students who are residents of this State and are enrolled in public institutions of higher education in this State. The method, amount, and type of distribution shall be prescribed by law.*

At the end of Fiscal Year 2015-16, a total of $5 million from interest earned and $32.2 million from the principal of the Escheat Fund was sent to SEAA. The General Assembly mandated that additional principal from the Escheat Fund of $16.3 million go to the State Board of Community Colleges, and $6.5 million to the Department of Military and Veterans Affairs to provide educational assistance for needy and worthy students.

As of June 30, 2016, the Escheat Fund was valued at approximately $587 million from a combination of unclaimed property collected from holders and the investments of the Escheat Fund. As the custodian of these funds, North Carolina remains liable to the rightful owners for the full amount of unclaimed property reported to DST. N.C.G.S. § 116B-63(b) states that once unclaimed or abandoned property is turned over to DST, "the

State assumes custody and responsibility for the safekeeping of the property."[2] Importantly, the State is responsible to potentially return an additional $1.12 billion which has been reported since June 1971, but has been appropriated by the General Assembly from the Escheat Fund principal over the last 13 years.

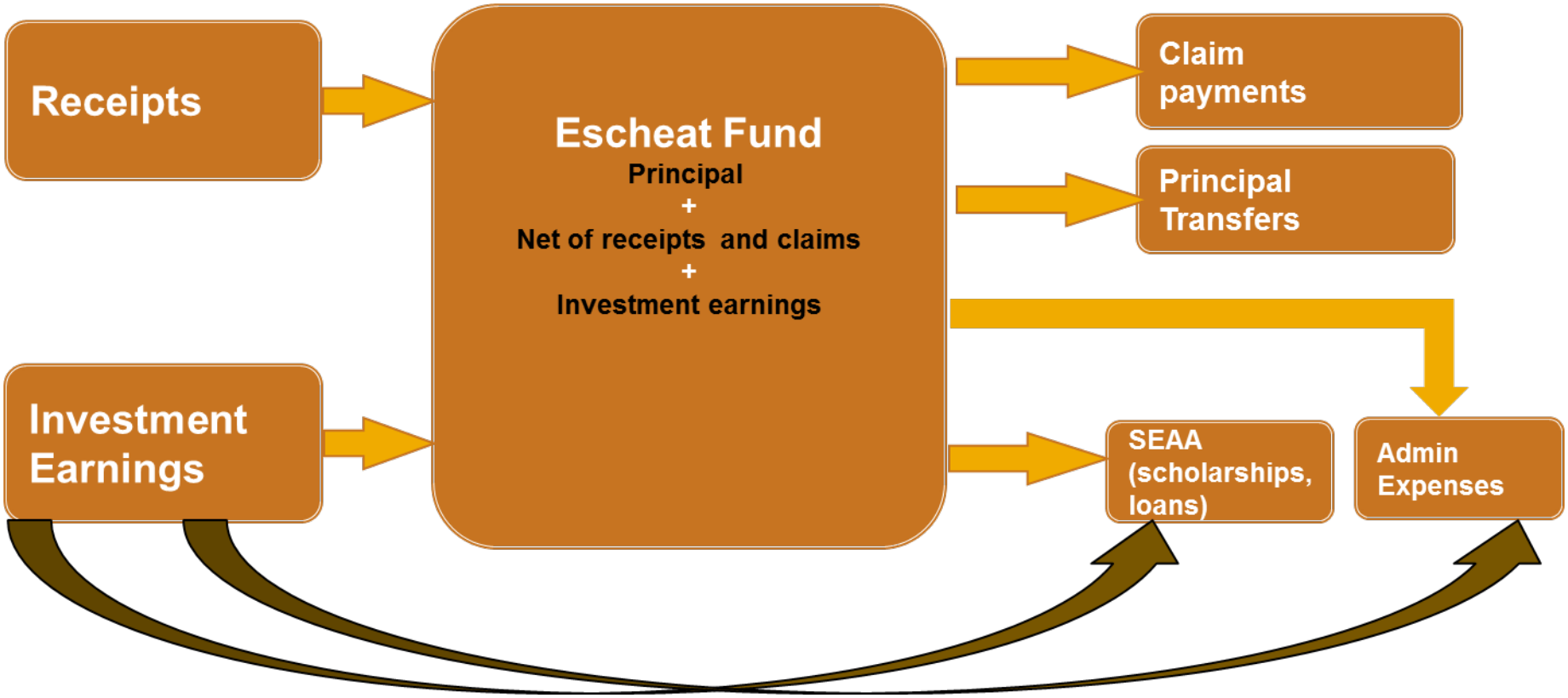
The remainder of this section contains a series of charts:

1. Chart 1 provides a high-level schematic of the mechanics of monetary flows for the Escheat Fund.
2. Charts 2 through 5 show annual receipts, claims, and administrative expense data by fiscal year.
3. Chart 6 shows the history of principal transfers from the Escheat Fund.

Note these charts were principally created by AHIC earlier this year and utilize a partial year projection for the 2015-16 Fiscal Year. The information in these charts may not match other DST publications, but the differences do not materially impact the analysis.

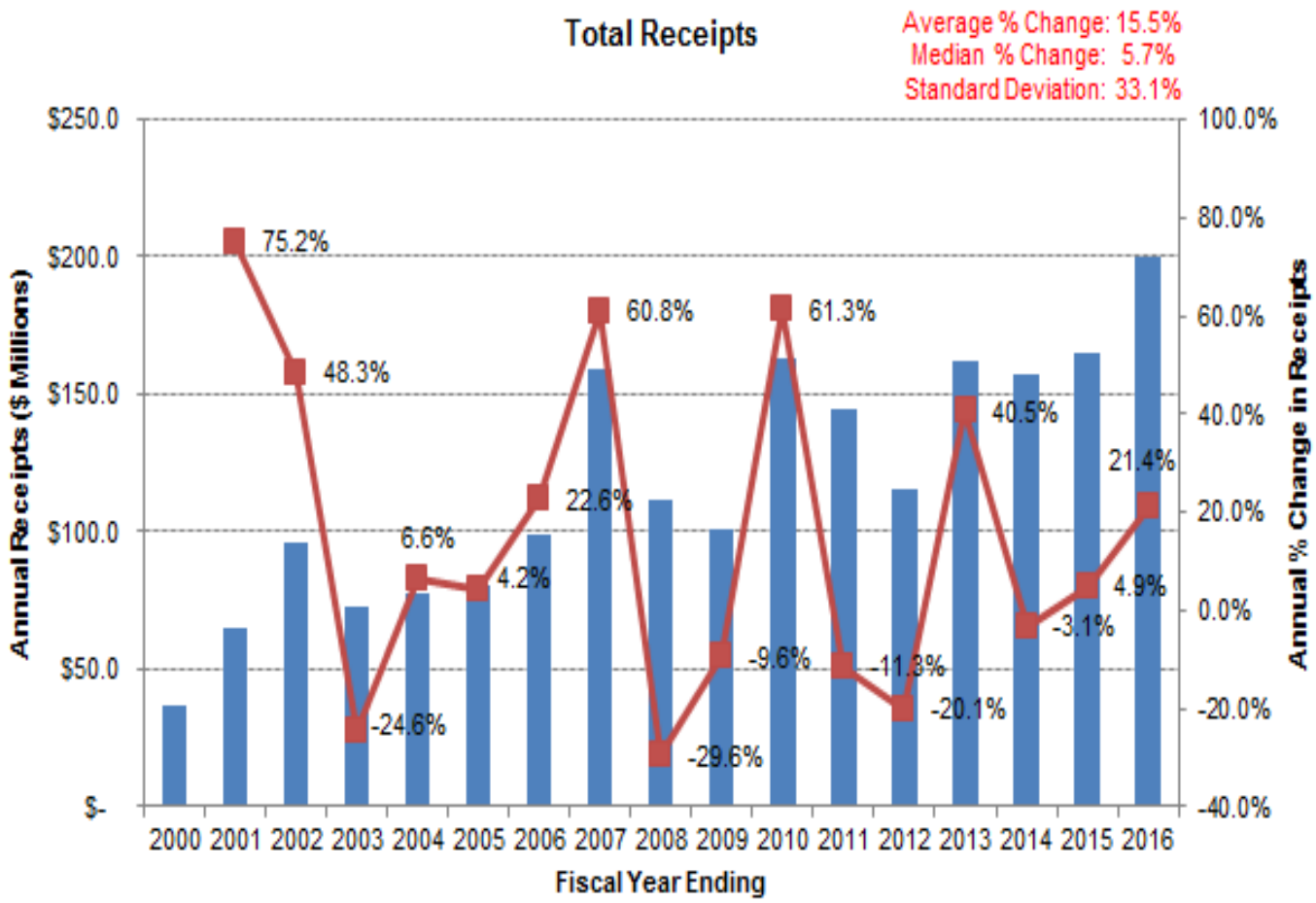
[2] As custodian of the Escheat Fund, the State holds the property, or its proceeds, of private individuals in perpetuity until the rightful ownership is determined. *See Rose's Stores, Inc. v. Boyles*, 106 N.C. App. 263, 265, 416 S.E.2d 200, 201 (1992).

Chart 1: Mechanics of Monetary Flows for the Escheat Fund



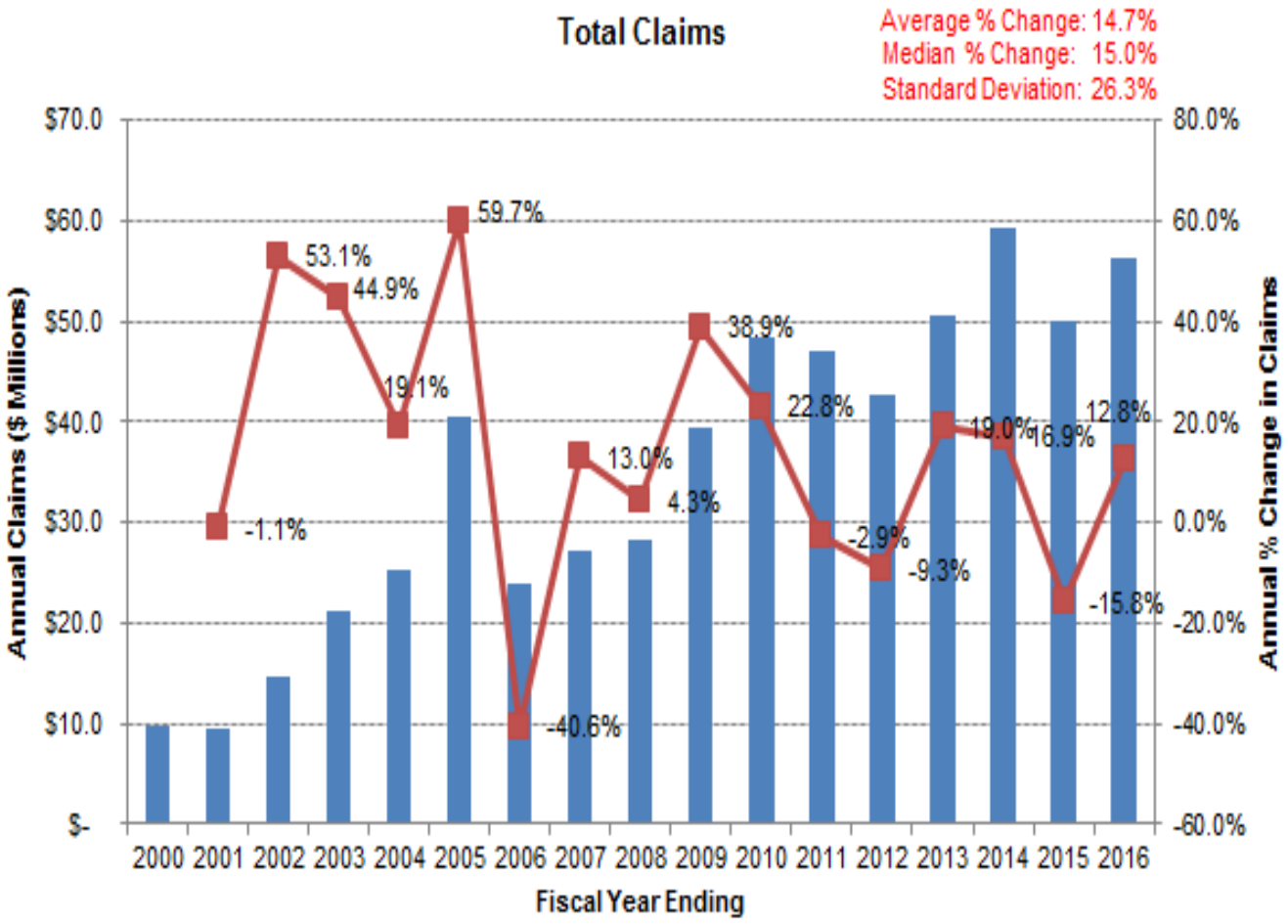
Source: AHIC and DST

Chart 2: Total Receipts by Escheat Fund since Fiscal Year 2000



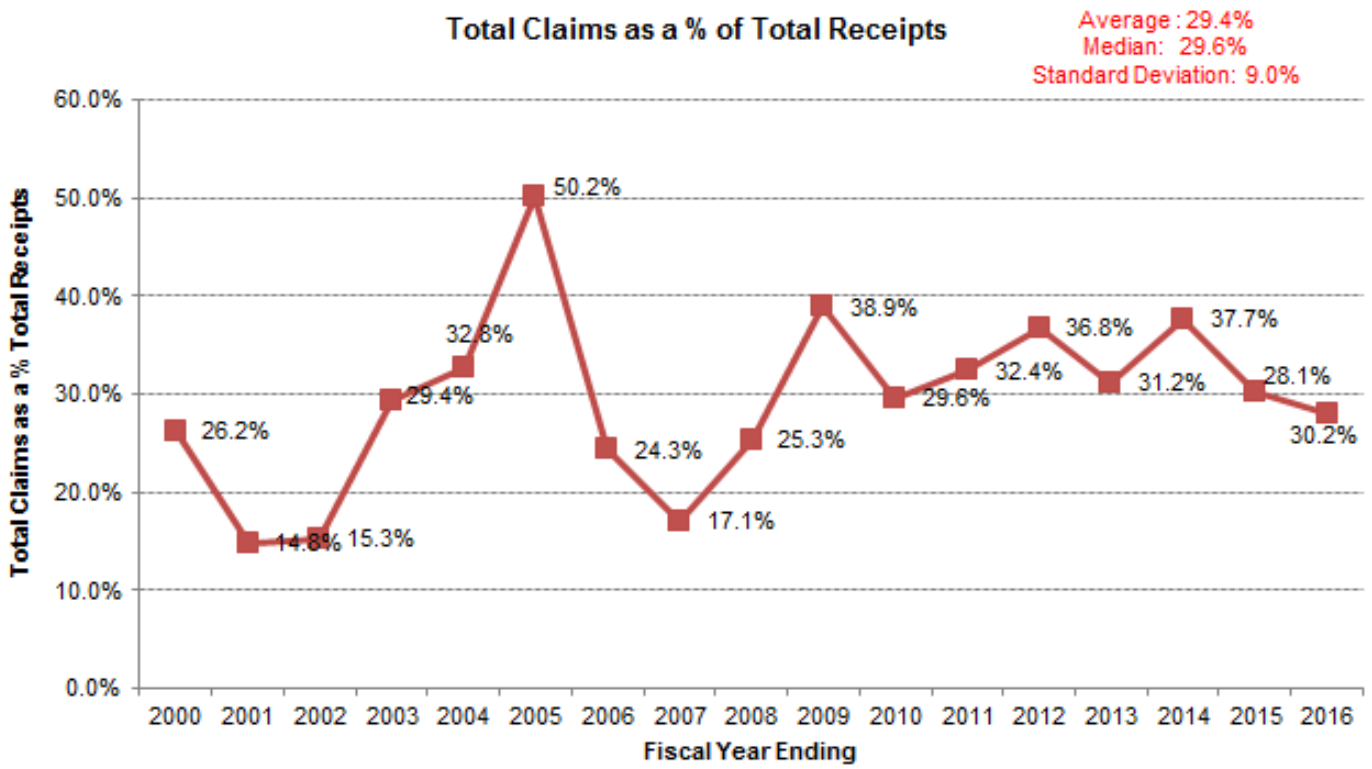
Source: AHIC and DST

Chart 3: Total Claims Paid from the Escheat Fund since Fiscal Year 2000



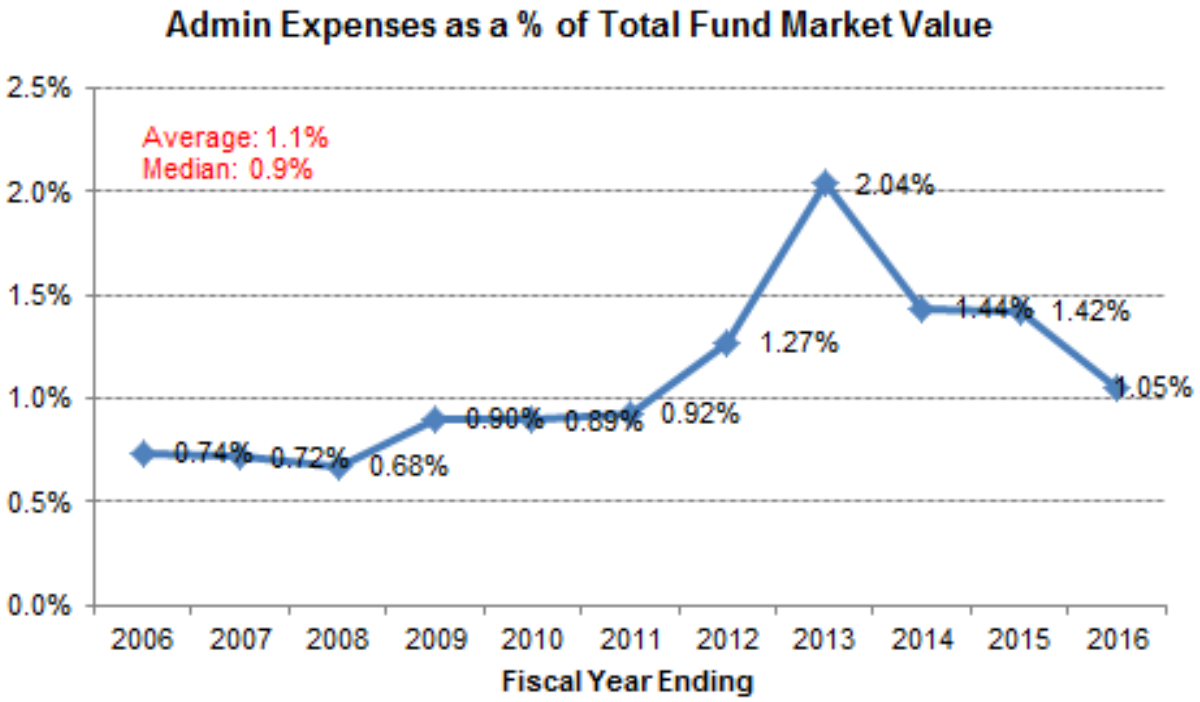
Source: AHIC and DST

Chart 4: Total Claims Paid from the Escheat Fund as a Percent of Total Receipts since Fiscal Year 2000



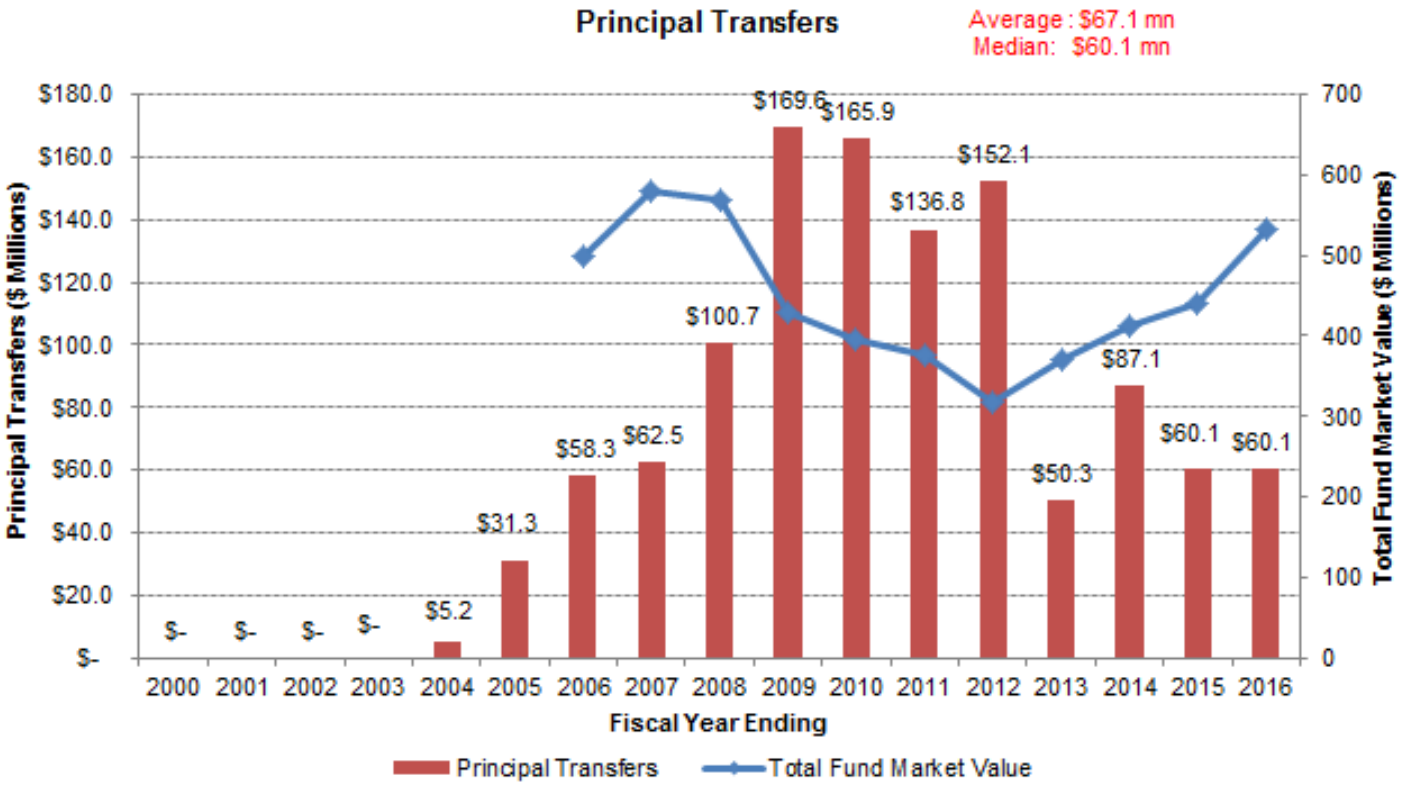
Source: AHIC and DST

Chart 5: Administrative Expenses of the Escheat Fund by Fiscal Year



Source: AHIC and DST

Chart 6: Principal Transfers from the Escheat Fund since Fiscal Year 2000



Source: AHIC and DST

III. Performance of the Escheat Fund

Table 1 shows the performance of the invested balance of the Escheat Fund over various periods ending June 30, 2016 (i.e., excluding the securities held in kind on behalf of claimants). Pursuant to N.C.G.S. § 147-69.2(b)(12), up to 20 percent of the Escheat Fund's assets can be invested in the authorized Public Equity, Real Estate, Private Equity, Opportunistic Fixed Income, and Inflation Protection asset classes. The remainder must be invested in the authorized Investment-Grade Fixed Income asset class. At June 30, 2016, the Escheat Fund had a total portfolio market value of $533.0 million, with $500.6 million invested in Fixed Income, and $32.4 million invested in Private Equity.

The Escheat Fund's asset allocation has been heavily weighted toward Short-Term Fixed Income investments as a result of the large appropriations out of the Fund during and after the "Great Financial Crisis" (i.e., see Chart 6). However, the Escheat Fund Investment Policy Statement is expected to be updated in the upcoming fiscal year to reflect important changes made in Session Law 2015-241:

1. Subsection (b)(12) of N.C.G.S. § 147-69.2 now contains an express statement that "[i]t is the intent of the General Assembly that the Escheat Fund provide a perpetual and sustainable source of funding for the purposes authorized by the State Constitution."
2. The Venture Capital Multiplier Fund within the Escheat Fund has been created to earn long-term net-of-fee investment returns competitive with other comparable illiquid investment opportunities in the institutional investment marketplace. Subject to the primary objective, the VCMF shall seek to develop entrepreneurial commercial activities within North Carolina by attracting, facilitating, and stimulating venture capital funding and other growth-oriented capital investments with a North Carolina Nexus, including early stage investments originating from North Carolina university technology transfer programs.

Table 1: Escheat Fund Annualized Net of Fee Performance for Periods ended June 30, 2016

	Market Value ($000)	1 Year (%)	3 Years (%)	5 Years (%)	10 Years (%)
Short Term Fixed Income (STIF return)	379,659	0.77	0.58	0.58	1.85
Long Term Fixed Income	120,942	8.06	5.42	5.38	6.77
Private Equity	32,428	(0.78)	3.27	4.74	-
Escheats Composite ex Fixed Income	**32,428**	**(0.78)**	**3.27**	**4.80**	**3.90**
Escheats Composite ex STIF	**153,370**	**6.03**	**4.99**	**5.00**	**5.93**

Source: DST; over the 5 Year and 10 Year period the Escheat Fund had public equity investments.

With these legislative changes stating the General Assembly's intentions to treat the Escheat Fund as an educational endowment fund, DST is comfortable re-orienting the asset allocation policy from short-term principal preservation with ready liquidity to emphasize more long-term growth. The impact on the Escheat Fund of this potential change will be discussed below.

IV. Forward-Looking Analysis of the Escheat Fund

DST retained AHIC to conduct an asset allocation/liability analysis of the Escheat Fund. AHIC's analysis entailed the following components:

1. Evaluation of the historical and projected (expected) future cash flows in and out of the Fund (i.e., unclaimed property into the Fund and claims out).
2. Projection of the Fund's administrative expenses.
3. Monte Carlo simulation modeling to project future assets and liabilities in various market environments.
4. Stress testing of various key variables (e.g., total receipts into the fund, total claims paid out, principal transfers, etc.) to determine the sustainable levels of withdrawals from the Fund.
5. Evaluation of the current asset allocation of the Escheat Fund.
6. Application of AHIC capital market assumptions to project future growth and risk for the Fund based on current asset allocation – returns, risks, and correlations for the relevant asset classes.
7. Scenario analysis to test various asset allocations' risk and return impact on the Fund.

There have not been any actuarial valuations performed of the Escheat Fund that could provide forward-looking projections of key variables (e.g., receipts into the Fund and claims out). AHIC received extensive data files, a May 2013 statistical analysis of the Escheat Fund prepared by North Carolina State University graduate students, and DST guidance on certain key variables:

1. Annual claims should be at or above $50 million.
2. Principal withdrawals for fiscal year 2016-17 should be the same as 2015-16 (i.e., $60.1 million).
3. Administrative expenses should approximate 1.0% of the Fund market value, although expenses could be capped for longer-term projections.
4. AHIC should use their asset allocation return and risk assumptions to drive their model. At the current asset allocation, AHIC projects over the next 10 years the Fund will earn about 2% per year.

Given that one of the primary objectives of the AHIC analysis is to determine the sustainable levels of withdrawals from the Fund and the uncertainty associated with forward-looking projections of key variables, they employed a stress testing framework. In other words, instead of using one point-estimate of financial driver growth and/or volatility estimates, AHIC's analysis relied on multiple scenarios with varying growth/volatility estimates (i.e., see Tables 2 and 3).

Table 2: AHIC Escheat Fund Receipts Scenarios

Total Receipts	Expected Growth	Expected Volatility
Scenario A	-5.0%	20.0%
Scenario B	0.0%	20.0%
Scenario C	5.0%	20.0%

Source: AHIC

Table 3: AHIC Escheat Fund Claims Scenarios

Total Claims	Total Claims as a % of Total Receipts
Scenario (i)	35.0%
Scenario (ii)	50.0%
Scenario (iii)	75.0%
All Scenarios subject to a floor (minimum) of $50.0 Million	

Source: AHIC

Using the preceding assumptions and modeling under the so-called "Monte Carlo" algorithmic methods, AHIC solved for the largest **sustainable annual principal transfers** attainable over years 2 through 10 while targeting maintaining the current inflation-adjusted value of the Fund at year 10. For a single asset allocation, AHIC produced 27 sets of results defined by:

1. 3 levels of probability of success (i.e., 50% of the time periods, 75%, or 95%).
2. The 9 scenarios defined in Tables 2 and 3 (i.e., A(i), A(ii), A(iii), B(i), etc.).

For each scenario, AHIC also examined the projected median market value and a 5th percentile market value of the Fund at the end of 10 years. Key takeaways were:

1. The final projected market value of the Fund in year 10 is higher when there is more growth in receipts and a lower amount of claims as a percent of receipts (and vice versa).
2. The 5th percentile (i.e., poor) outcomes are significantly worse when claims as a percent of receipts are elevated.
3. The final projected market value of the Fund in year 10 is higher for asset allocations with higher expected rates of return.

DST staff evaluated the AHIC modeling and their outputs and found them consistent with expectations. DST staff then conducted two additional exercises:

1. Narrowed the scenarios to those that reflected DST's risk appetite as program administrator and investment fiduciary to the Fund.

2. Used DST investment return assumptions to project Fund market values and interest transfers over a 20-year planning horizon in various scenarios.

With respect to narrowing the assumptions and scenarios:

1. Chart 2 shows that median annual receipts growth since 2000 has been 5.7%. DST believes a more conservative assumption is 0% based on UPD's review of receipts trends for the last 10 years by business type. Beginning in 2012, the proceeds from large life insurance audits began to materially increase receipts. UPD expects these audit-related report levels to taper off, although recent statutory changes possibly could increase the voluntary reporting by life insurance companies compared to the pre-2012 period.
2. Chart 4 shows the median annual "claims as a percent of total receipts" since 2000 was about 30%. DST believes a more conservative assumption is 50% to 75% based on three considerations:
    a. The State is expected to hold the property, or its proceeds, of private individuals in perpetuity until the rightful ownership is determined. At this point, the State is responsible to potentially return an additional $1.12 billion which has been reported since June 1971, but has been appropriated by the General Assembly from the Escheat Fund principal over the last 13 years.
    b. Higher than expected claim rates has a powerful negative effect on the projected inflation-adjusted market value over long periods of time (i.e., see Table 4) and thus pose a major risk to the General Assembly's intent. Growth in receipts from insurance companies has been strong and the NC State study found that those properties have twice the odds of being claimed.
    c. DST continues to expand outreach efforts to proactively return property.
3. DST believes that financial planning for the Escheat Fund should target a high probability of success of meeting the General Assembly's intent (i.e., 75% or 95% probability of maintaining the inflation-adjusted value over the intermediate- and long-term).

Table 4: AHIC Output for Scenario B (i.e., 0% Annual Growth in Receipts) and Current Asset Allocation

	Claims Percent of Receipts Scenarios		
Current Allocation	**i (35%)**	**ii (50%)**	**iii (75%)**
End of 10 Years Projected Inflation-Adjusted Market Values			
50th Percentile	$1,362.0	$1,147.0	$772.0
5th Percentile	$699.0	$648.0	$497.0
Sustainable Annual Principal Transfers (Years 2 through 10)			
50% Probability	$112.5	$82.9	$32.2
75% Probability	$73.8	$55.5	$17.3
95% Probability	$24.4	$16.9	$0.0

Source: AHIC

The foregoing analysis and the information in Table 4 lead DST to conclude that principal transfers must decline relative to recent levels of appropriations (i.e., must be lower than $60 million per year). Depending on the outlook and degree of conservativeness, the recommended sustainable annual principal transfer is between $0 and $55 million.

To finalize its analysis, DST created a deterministic model to incorporate:

1. Baseline assumptions of 0% annual growth in receipts and a 50% annual claims to receipts ratio.
2. The asset class return projections from the 2016 North Carolina Retirement Systems asset liability study (i.e., 2.4% annualized return 1-10 years and 4.5% 11-20 years at the current asset allocation).
3. A 20-year planning horizon.
4. Annual principal transfers of $0, $25 million, $50 million, or $60 million.
5. A sample alternative growth-oriented asset allocation policy (i.e., 3.6% annualized return 1-10 years and 6.0% 11-20 years).

Table 5 presents the summary statistics from the DST model utilizing the current asset allocation. Table 6 replicates the analysis with a growth-oriented asset allocation. Key takeaways:

1. Lower annual principal transfers lead to lower cumulative principal and interest transfers, but higher ending values after 20-years (and vice versa).
2. Lower annual principal transfers lead to a higher total real economic value of the Escheat Fund.[3] Over 20-years, the total real economic value of the Escheat Fund

[3] The total real economic value of the Escheat Fund is defined as the present value of annual principal and interest transfers over 20-years plus the discounted ending value of the Escheat Fund

is $155 million to $268 million higher if annual principal transfers drop from the recent levels of $60 million to $0.

3. A growth-oriented asset allocation should further improve outcomes.

Table 5: DST 20-Year Modeling Horizon and Current Asset Allocation

Annual Principal Transfers ($Millions)	Cumulative Principal and Interest Transfers ($Millions)	Ending Value after 20-Years ($Millions)	Present Value of Transfers and Ending Value ($Millions)
$0	1,038	2,330	2,315
$25	1,339	1,855	2,251
$50	1,641	1,380	2,186
$60	1,762	1,190	2,160

Source: DST

Table 6: DST 20-Year Modeling Horizon and Growth-Oriented Asset Allocation

Annual Principal Transfers ($Millions)	Cumulative Principal and Interest Transfers ($Millions)	Ending Value after 20-Years ($Millions)	Present Value of Transfers and Ending Value ($Millions)
$0	1,428	2,330	2,613
$25	1,667	1,855	2,501
$50	1,906	1,380	2,389
$60	2,001	1,190	2,345

Source: DST

The foregoing analysis lead DST to conclude that the General Assembly should endeavor to lower the annual principal transfers over time to the lower end of the $0 to $55 million range.

at 20-years. A 2% discount rate is utilized to approximate inflation expectations and convert future dollars into today's dollars.