How to Create a Solid Retirement Plan
Focus on clients.
Focus on clients. Exceptional value.
SAVING
SAVING

INVESTING
SAVING ENOUGH?

INVESTING WISELY?
Duke fully funds the Employees’ Retirement Plan (ERP) for Biweekly paid employees/non-exempt employees

1.25% of average final compensation TIMES years of credited service (up to 20 years) PLUS 1.66% of average final compensation TIMES years of credited service over 20

Example – Employee retiring at age 65 with 30 years of credited service and a salary of $40,000.

<table>
<thead>
<tr>
<th>ERP Formula</th>
<th>Years of credited service</th>
<th>Average Final Compensation</th>
<th>Equals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.25%</td>
<td>20 years of service</td>
<td>$36,638</td>
<td>$9,160</td>
</tr>
<tr>
<td>1.66%</td>
<td>10 years of service</td>
<td>$36,638</td>
<td>$6,082</td>
</tr>
<tr>
<td>Annual Benefit</td>
<td></td>
<td></td>
<td>$15,242</td>
</tr>
<tr>
<td>Monthly Benefit</td>
<td></td>
<td></td>
<td>$1,270</td>
</tr>
</tbody>
</table>
Duke's Contribution to the Faculty and Staff Retirement Plan for Monthly paid employees/exempt employees

8.9% of the first $61,850 of salary and 13.2% of annual salary in excess of $61,850, up to a statutory salary limit of $270,000

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>8.9%</td>
<td>first $61,850 of salary</td>
<td>$5,504.65</td>
</tr>
<tr>
<td>13.2%</td>
<td>remaining $3,150 of salary</td>
<td>$415.80</td>
</tr>
<tr>
<td>Total in 2017</td>
<td>$65,000</td>
<td>$5,920.45</td>
</tr>
</tbody>
</table>
7% is the average saving rate at Vanguard.

Vanguard recommends saving 12%–15%.
Retirement income calculator

How much income will you need in retirement? Are you on track? Compare what you may have to what you will need.

How old are you, and when will you retire?

I’m 52 and plan to retire at age 62

What’s your current annual income?

$45,000 per year

How much do you save annually for retirement? †

$7,000 (16% of your income)

How much have you already saved for retirement? †

$130,000

What’s your expected average annual rate of return?

5.0%

Monthly income in retirement ‡

$0 per month (today’s dollars)

What’s your expected average annual rate of return?

0% of your salary at retirement

Legend: Retirement plan

Social Security

What you’ll need: $2,963

What you may have: $785

What percentage of your current income do you expect to need in retirement? Learn more.

79%

$0 per month (today’s dollars)

0% of your salary at retirement

Include your estimated monthly Social Security benefit. Tell us about it.

$0 per month (today’s dollars)

Include a pension benefit. Tell us about it.

$0 per month (today’s dollars)

†Include contributions (by you and your employer) to plans such as 401(k) and 403(b) plans. Also include IRAs and any taxable savings earmarked for retirement. This hypothetical illustration does not represent the return on any particular investment and the rate is not guaranteed. Note: All investing is subject to risk, including the possible loss of the money you invest.

‡These values are pre-tax and shown in today’s dollars. For more information, click here.
TIME
Time is on your side

After 10 years

<table>
<thead>
<tr>
<th>Contributions</th>
<th>Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>$16,800</td>
<td>$54,700</td>
</tr>
</tbody>
</table>

$71,500

Assumes a $50,000 salary, saving 10% over 30 years, a 6% annual rate of return, and a 2% annual pay increase.

This hypothetical illustration does not represent the return on any particular investment and the rate is not guaranteed. The final account balance does not reflect any taxes or penalties that may be due upon distribution. Withdrawals from a traditional IRA before age 59½ are subject to a 10% federal penalty tax unless an exception applies.
Time is on your side

Assumes a $50,000 salary, saving 10% over 30 years, a 6% annual rate of return, and a 2% annual pay increase.

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Time is on your side

Assumes a $50,000 salary, saving 10% over 30 years, a 6% annual rate of return, and a 2% annual pay increase.

After 10 years
- Contributions: $16,800
- Earnings: $37,900
- Total: $54,700
- After 10 years: $71,500

After 20 years
- Contributions: $33,600
- Earnings: $148,700
- Total: $212,300
- After 20 years: $215,100

After 30 years
- Contributions: $50,400
- Earnings: $369,000
- Total: $419,400
- After 30 years: $491,500

Assumes a $50,000 salary, saving 10% over 30 years, a 6% annual rate of return, and a 2% annual pay increase.

This hypothetical illustration does not represent the return on any particular investment and the rate is not guaranteed. The final account balance does not reflect any taxes or penalties that may be due upon distribution. Withdrawals from a traditional IRA before age 59½ are subject to a 10% federal penalty tax unless an exception applies.
PRE-TAX
PRE-TAX

ROTH
Which one is better for me?
PRE-TAX

- Low savings.
- Tax credits.
- High tax bracket.

ROTH
- Low savings.
- Tax credits.
- High tax bracket.

- On track for retirement.
- Maximum savers.
- Low tax bracket.
TAX DIVERSIFICATION
Asset classes

- Short-term reserves
- Bonds
- Stocks

All investing is subject to risk, including the possible loss of the money you invest. Bond funds are subject to the risk that an issuer will fail to make payments on time, and that bond prices will decline because of rising interest rates or negative perceptions of an issuer’s ability to make payments.
The performance data shown represent past performance, which is not a guarantee of future results. When determining which index to use and for what period, we selected the index that we deemed to be a fair representation of the characteristics of the referenced market, given the information currently available. For U.S. stock market returns, we use the Standard & Poor’s 90 from 1926 – 3/3/1957, the Standard & Poor’s 500 Index from 3/4/1957 through 1974, the Wilshire 5000 Index from 1975 through April 22, 2005, the MSCI US Broad Market Index through June 2, 2013, and the CRSP US Total Market Index thereafter. Unlike stocks and bonds, U.S. Treasury bills are guaranteed as to the timely payment of principal and interest. Index performance is not illustrative of any particular investment because you cannot invest in an index.

All investing is subject to risk, including the possible loss of the money you invest. Bond funds are subject to the risk that an issuer will fail to make payments on time, and that bond prices will decline because of rising interest rates or negative perceptions of an issuer’s ability to make payments. Source: Vanguard.
Create your investment plan.
Invest for the long term.
Don’t focus on individual stock selection.
Choose an appropriate investment mix.
STOCKS

BONDS
The bar chart and accompanying figures show the best and worst 1-, 5-, 10- and 20-year periods of market performance within the 1926–2016 time frame. The performance data shown represent past performance, which is not a guarantee of future results. When determining which index to use and for what period, we selected the index we deemed to fairly represent the characteristics of the referenced market, given the available choices. For U.S. stock market returns, we use the Standard & Poor’s 90 Index from 1926 to March 3, 1957; the Standard & Poor’s 500 Index from March 4, 1957, to 1974; the Wilshire 5000 Index from 1975 to April 22, 2005; the MSCI US Broad Market Index through June 2, 2013; and CRSP U.S. Total Market Index thereafter. Source: Vanguard.
Do it yourself.
IQ
Investor Questionnaire
Asset mix

- 80%
- 20%
Asset mix

- 20%
- 80%

- 30%
- 70%
Asset mix

- 80% (20% on the left)
- 70% (30% in the middle)
- 60% (40% on the right)
Asset mix

Current asset mix
- 31%
- 69%

Suggested asset mix
- 40%
- 60%
Do it yourself.

Choose from the funds in your Plan’s lineup.
Choose from the funds in your Plan’s lineup.
Choose from the funds in your Plan’s lineup.
The funds in your retirement Plan.
Let Vanguard help you.
Let Vanguard help you.

Target Retirement Funds.
Target Retirement Funds

- U.S. Stocks
- International Stocks
- U.S. Bonds
- International Bonds
Portfolio allocation

Early Retirement

Pre-retirement

Late Retirement

Years to target date

Years beyond target date

U.S. stocks 60%

International stocks 40%

International nominal bonds 30%

U.S. nominal bonds 70%

Short-term TIPS 0–24% of total fixed income

*Target date is the year stated in the investment name and assumes retirement at age 65.

Source: Vanguard.
All investing is subject to risk, including the possible loss of the money you invest. Investments in Target Retirement Funds are subject to the risks of their underlying funds. The year in the fund name refers to the approximate year (the target date) when an investor in the fund would retire and leave the workforce. The fund will gradually shift its emphasis from more aggressive investments to more conservative ones based on its target date. An investment in a Target Retirement Fund is not guaranteed at any time, including on or after the target date.
Resources.
### Fund name | Symbol/Number
---|---
Vanguard Target Retirement 2016  | VTXVX 0303
Vanguard Target Retirement 2025  | VTTVX 0304

### Core Investments

<table>
<thead>
<tr>
<th>Fund name</th>
<th>Symbol/Number</th>
</tr>
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</table>
Vanguard Target Retirement Income | VTIXX 0308 |
Vanguard Federal Money Mkt Fund | VMFXX 0033 |
Vanguard Prime Money Mkt Fund | VMMXX 0030 |
Vanguard Retirement Savings Trust | — 0034 |
Vanguard Long-Term Invest-Gr Inv | VWESX 0028 |
Product summary

- Seeks to track the performance of the CRSP U.S. Total Market Index.
- Invests in large-, mid-, and small-cap stocks diversified across growth and value styles.
- Passively managed, using index sampling.

View prospectus and reports

Price and performance

<table>
<thead>
<tr>
<th></th>
<th>As of 08/09/2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>$46.24</td>
</tr>
<tr>
<td>Change</td>
<td>3.93%</td>
</tr>
<tr>
<td>SEC yield as of 11/07/2014</td>
<td>1.84%</td>
</tr>
</tbody>
</table>

Average annual performance

<table>
<thead>
<tr>
<th>Year</th>
<th>1 year</th>
<th>3 year</th>
<th>5 year</th>
<th>10 year</th>
<th>Since inception</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15%</td>
<td>18%</td>
<td>20%</td>
<td>18%</td>
<td>16%</td>
</tr>
</tbody>
</table>

Fund facts

<table>
<thead>
<tr>
<th>Asset class</th>
<th>Domestic Stock Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
<td>Large Blend</td>
</tr>
<tr>
<td>Gross expense ratio as of 01/28/2014</td>
<td>0.22%</td>
</tr>
<tr>
<td>Net expense ratio as of 04/20/2014</td>
<td>0.02%</td>
</tr>
<tr>
<td>Fund number</td>
<td>0071</td>
</tr>
<tr>
<td>Fund advisor</td>
<td>Vanguard Equity Investment Group</td>
</tr>
</tbody>
</table>

Risk potential

<table>
<thead>
<tr>
<th>Less risk</th>
<th>More risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less reward</td>
<td>More reward</td>
</tr>
</tbody>
</table>

Average annual performance

<table>
<thead>
<tr>
<th>As of 08/09/2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>15%</td>
</tr>
</tbody>
</table>

Hypothetical growth of $10,000

<table>
<thead>
<tr>
<th>As of 10/21/2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>$28,000</td>
</tr>
</tbody>
</table>

How the potential risk affects your investment

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>$5,000</td>
<td>$12,000</td>
<td>$19,000</td>
<td>$26,000</td>
<td>$33,000</td>
<td>$40,000</td>
</tr>
</tbody>
</table>
SAVING ENOUGH?

INVESTING WISELY?
vanguard.com/retirementplans
For more information about any fund, visit vanguard.com or call 800-523-1188 to obtain a prospectus or, if available, a summary prospectus. Investment objectives, risks, charges, expenses, and other important information about a fund are contained in the prospectus; read and consider it carefully before investing.

All investing is subject to risk, including the possible loss of the money you invest. Diversification does not ensure a profit or protect against a loss.

Bond funds are subject to the risk that an issuer will fail to make payments on time, and that bond prices will decline because of rising interest rates or negative perceptions of an issuer’s ability to make payments. While U.S. Treasury or government agency securities provide substantial protection against credit risk, they do not protect investors against price changes due to changing interest rates. Unlike stocks and bonds, U.S. Treasury bills are guaranteed as to the timely payment of principal and interest. Investments in stocks or bonds issued by non-U.S. companies are subject to risks including country/regional risk and currency risk.
vanguard.com/enroll
vanguard.com/retirementplans