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# TACTICAL MODEL REPORT

2023 Q2

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Dauphin County, PA Deferred Compensation Plan

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## Stock Score

39

## Bond Score

43

## Quarterly Review

### New Look and Model Process

We are updating the quarterly report and model process. The process will shift to using a Stock and Bond Score to determine how much will be invested in High Risk and Medium Risk Category Investments. This is explained in the Tactical Model Investment Process. If you have questions, please contact us at [hetrick@retirementc.com](mailto:hetrick@retirementc.com).

### Investment Environment

Last year was an epically bad year for stocks and bonds. Stocks and bonds both recovered in the first quarter of 2023 with the most beaten down categories of 2022 doing the best. Our view is that it will be a challenging year for the stock market. We feel that it is likely that the U.S. economy will experience a recession later in the year. As job losses, higher cost of financing debt, and weakening consumer demand flows through the economy, it should lower revenues and earnings of companies, which could flow through to lower prices.

Our base case scenario is that there will be a roughly 20% decline in the S&P 500 index sometime within the next year, which is hopefully followed by a decent recovery. In a scenario like this, we could look back a year from now in the stock market could be + or -5% from its current levels. This would not be that bad of a situation. We do not think the chances are as high, but there are two other possibilities.

The near-term positive one is that the Federal Reserve lowers rates, there is no recession, and Federal government continues to provide money directly to tax payers. One would expect this to cause markets to move higher, but we feel this would only be kicking the can down the road and lead to a bigger future crisis. One cannot forget that it is an election year in 2024 and no sitting administration wants to be in the midst of a recession when they are on the campaign trail.

Looking at a more negative outcome, we could see stocks dropping roughly 45% from current levels over the next year or two should the Federal Reserve continue to raise rates and keep them high for a long period of time coupled with geopolitical unrest, such as China invading Taiwan or an escalation in the Ukraine war.

For bonds, unless the Federal Reserve surprises everyone by raising rates significantly above current levels, we feel that last year's bond carnage will not be replicated this year. In fact, if bond yields stabilize at current levels, then new bonds will be paying more income. If bond yields fall, then the opposite of what happened last year will occur, bond prices will rise.

It is getting to be a good time to be a saver. Finally, savings accounts, money markets, and Treasury Bills are paying above 1%. This time last year, the Alerus Money Market Fund was yielding around 0.03% and as of April 1st, it is yield over 4.5%. It is also FDIC insured.

# Tactical Model Investment Process

## Background

The plan's tactical models are designed to provide risk-managed approaches to conservative, moderate, and aggressive portfolios. They do this by shifting the exposure of high risk category investments within the model's constraints. The goal of the models is to have 50% or less of the drawdown and 75% or more of the upside of its benchmark. If this is achieved then investors should have similar or better returns with less volatility over a full market cycle.

## Process

On at least a quarterly basis, Retirement Collaborative LLC will determine the score for the stock market and bond market - the Stock and Bond Scores. The scores use a combination of indicators to determine the monthly score. If the stock score is 100, then the model will be fully invested in its maximum allowable allocation to High Risk Category investments. The appendix contains the risk ranking of the investment options available in the plan. As the stock score declines, less money will be allocated to high risk category investments. Money not invested in high risk category investments will be invested in Medium and Low Risk Category Investments. The bond score is used to determine how much should be allocated to medium risk investments and the remaining amount will be invested in Low Risk Category investments. What determines whether a model is conservative, moderate, or aggressive, are its constraints.

## Constraints

Model	Minimum High Risk Category Exposure	Maximum High Risk Category Exposure
<b>Tactical Conservative Model</b>	<b>0%</b>	<b>30%</b>
<b>Tactical Moderate Model</b>	<b>10%</b>	<b>60%</b>
<b>Tactical Growth Model</b>	<b>20%</b>	<b>90%</b>

## Fund Selection

The models are constructed using the individual investment options available in the plan. A list of these funds is contained in the appendix. When the model review takes place, the funds are ranked and money is allocated to the top ranked funds in each category.

## **Model Review**

The model review will take place at least quarterly and could be as frequently as monthly.

## **Risks**

Because there will be times when these models will have different exposure to low, medium and high risk category investments than their benchmarks, the models' performances will be inconsistent with the benchmark's performance. In a year like 2022 when both stocks and bonds were negative and a moderate allocation fund could have been down around 16%, if the Tactical Moderate Model was only down 8%, this inconsistency would be welcomed. Likewise, there will be times when a model will have less than the maximum exposure to high risk category investments when the stock market is rising. This will cause it to underperform its benchmark. This usually occurs when market trends are changing or they are in flux.

The other risk is that the models may concentrate their exposure to fewer funds or investment categories than a broadly diversified buy-and-hold model or fund. If the selection of the models' funds works out well, it will add to return compared to its benchmark; likewise, if it does not, it will detract from a comparative return.

# Tactical Conservative Model

<b>Description</b>	This model offers a risk-managed approach to conservative asset allocation. It can have as much as 30% exposure to High Risk Category investments and as little as 0%. Money not invested in High Risk Category investments will be invested in Medium and Low Risk Category Investments. The Stock and Bond Scores help to determine the exposure to High and Medium Risk Category Investments.
<b>Who is it for?</b>	It is ideal for a conservative investor who would like to have a higher potential return than a stable value fund, but lower volatility than a buy-and-hold investment strategy.
<b>Benchmark</b>	16% Vanguard Short-Term Bond Index Adm (VBIRX) 64% Vanguard Total Bond Market Index Adm (VBTLX) 08% Vanguard Total Intl Stock Index Admiral (VTIAX) 12% Vanguard Total Stock Mkt Idx Adm (VTSAX)
<b>Return Goal</b>	Over a full market cycle (from one market peak to the next or one market trough to the next), we would like to see the model outperform the benchmark above and the return of the plan's stable value fund. Would like to see this model have 50% or less of the downside capture and 75% or more of the upside capture of the benchmark.

## High Risk Category Exposure



## Medium Risk Category Exposure



## Low Risk Category Exposure



# Tactical Conservative Model Allocations

<b>Low Risk</b>	<b>50.0%</b>	<b>Alerus Money Market Fund</b>
	<b>13.0%</b>	<b>Dodge &amp; Cox Global Bond X (DODLX)</b>
<b>Medium Risk</b>	<b>12.5%</b>	<b>Vanguard Short Term Bond Index Fund (VBIRX)</b>
	<b>12.5%</b>	<b>Dodge &amp; Cox Income Fund X (DOXIX)</b>
<b>High Risk</b>	<b>2.4%</b>	<b>Pear Tree Quality Ordinary Shares (USBOX)</b>
	<b>2.4%</b>	<b>Artisan Developing World Fund - Advisor Shares (APDYX)</b>
	<b>2.4%</b>	<b>MFS New Discovery Value Fund Class R6 (NDVUX)</b>
	<b>2.4%</b>	<b>Neuberger Berman Large Cap Value Inst (NBPIX)</b>
	<b>2.4%</b>	<b>American Funds EuroPacific Growth Fund R6 (REGX)</b>

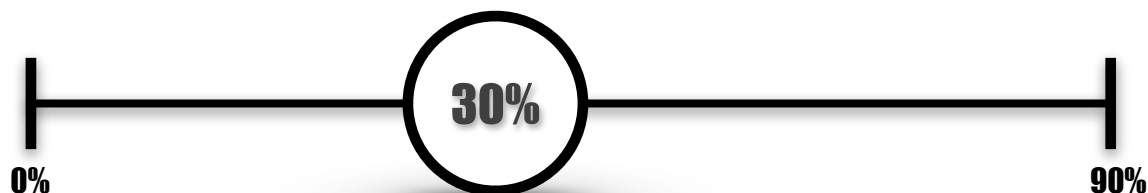
# Tactical Moderate Model

<b>Description</b>	This model offers a risk-managed approach to a moderate asset allocation. It can have as much as 60% exposure to High Risk Category investments and as little as 10%. Money not invested in High Risk Category investments will be invested in Medium and Low Risk Category Investments. The Stock and Bond Scores help to determine the exposure to High and Medium Risk Category Investments.
<b>Who is it for?</b>	It is ideal for a moderate investor who would like to have a similar or better long-term return with lower volatility than a buy-and-hold investment strategy.
<b>Benchmark</b>	08% Vanguard Short-Term Bond Index Adm (VBIRX) 32% Vanguard Total Bond Market Index Adm (VBTLX) 14% Vanguard Total Intl Stock Index Admiral (VTIAX) 36% Vanguard Total Stock Mkt Idx Adm (VTSAX)
<b>Return Goal</b>	Over a full market cycle (from one market peak to the next or one market trough to the next), we would like to see the model outperform the benchmark above and the return of the plan's stable value fund. Would like to see this model have 50% or less of the downside capture and 75% or more of the upside capture of the benchmark.

## High Risk Category Exposure



## Medium Risk Category Exposure



## Low Risk Category Exposure



# Tactical Moderate Model Allocations

<b>Low Risk</b>	<b>40.0%</b>	<b>Alerus Money Market Fund</b>
	<b>10.0%</b>	<b>Dodge &amp; Cox Global Bond X (DODLX)</b>
<b>Medium Risk</b>	<b>10.0%</b>	<b>Vanguard Short Term Bond Index Fund (VBIRX)</b>
	<b>10.0%</b>	<b>Dodge &amp; Cox Income Fund X (DOXIX)</b>
<b>High Risk</b>	<b>6.0%</b>	<b>Pear Tree Quality Ordinary Shares (USBOX)</b>
	<b>6.0%</b>	<b>Artisan Developing World Fund - Advisor Shares (APDYX)</b>
	<b>6.0%</b>	<b>MFS New Discovery Value Fund Class R6 (NDVUX)</b>
	<b>6.0%</b>	<b>Neuberger Berman Large Cap Value Inst (NBPIX)</b>
	<b>6.0%</b>	<b>American Funds EuroPacific Growth Fund R6 (RERGX)</b>

# Tactical Growth Model

<b>Description</b>	This model offers a risk-managed approach to an aggressive asset allocation. It can have as much as 90% exposure to High Risk Category investments and as little as 20%. Money not invested in High Risk Category investments will be invested in Medium and Low Risk Category Investments. The Stock and Bond Scores help to determine the exposure to High and Medium Risk Category Investments.
<b>Who is it for?</b>	It is ideal for a moderate investor who would like to have a similar or better long-term return with lower volatility than a buy-and-hold investment strategy.
<b>Benchmark</b>	40% Vanguard Total Intl Stock Index Admiral (VTIAX) 60% Vanguard Total Stock Mkt Idx Adm (VTSAX)
<b>Return Goal</b>	Over a full market cycle (from one market peak to the next or one market trough to the next), we would like to see the model outperform the benchmark above and the return of the plan's stable value fund. Would like to see this model have 50% or less of the downside capture and 75% or more of the upside capture of the benchmark.

## High Risk Category Exposure



## Medium Risk Category Exposure



## Low Risk Category Exposure





## Tactical Growth Model Allocations

Low Risk	30.0%	Alerus Money Market Fund
	8.0%	Dodge & Cox Global Bond X (DODLX)
Medium Risk	7.5%	Vanguard Short Term Bond Index Fund (VBIRX)
	7.5%	Dodge & Cox Income Fund X (DOXIX)
	9.4%	Pear Tree Quality Ordinary Shares (USBOX)
High Risk	9.4%	Artisan Developing World Fund - Advisor Shares (APDYX)
	9.4%	MFS New Discovery Value Fund Class R6 (NDVUX)
	9.4%	Neuberger Berman Large Cap Value Inst (NBPIX)
	9.4%	American Funds EuroPacific Growth Fund R6 (RERGX)

## More Information

If you would like to discuss your Dauphin County, PA Deferred Compensation Plan account or have questions regarding the tactical models, please contact your plan advisory representative, **Stephen Hetrick** at **717-545-1447** or [hetrick@retirementc.com](mailto:hetrick@retirementc.com). There is also additional educational information on the plan's web portal - [www.dauphincountydcplan.com](http://www.dauphincountydcplan.com) and the Dauphin County's intranet site. To view and interact with your account, please visit the Alerus participant website at <https://retirementlogin.alerus.com/>. They also have a mobile app available on the Apple App Store and the Google Play Store - Alerus Retirement.

# Appendix

Low Risk	Money Market	Alerus Money Market Fund
	Short-Term Bond	Vanguard Short Term Bond Index Fund (VBIRX)
Medium Risk	Core Bond	Fidelity US Bond Index (FXNAX)
	Core Plus Bond	Dodge & Cox Income Fund X (DOXIX)
	Global Bond	Dodge & Cox Global Bond X (DODLX)
	Foreign Bond	Vanguard Vanguard INTL Bond Index Fund (VTABX)
	Inflation Protected Securities	Fidelity Inflation Protected Bond Index (FIPDX)
	High Yield Bond	BrandywineGlobal High Yield I (BGHIX)
	Large Cap Value	Neuberger Berman Large Cap Value R6 (NRLCX)
High Risk	Large Cap Blend	Vanguard Total Stock Market Index Adm (VTSAX)
	Large Cap Blend	Pear Tree Quality Ordinary Shares (USBOX)
	Large Cap Growth	Fidelity Large Cap Growth Enhanced Index Fund (FLGEX)
	Mid Cap Value	American Century Mid Cap Value Fund Y (AMVYX)
	Mid Cap Blend	Vanguard Mid Cap Index Adm (VIMAX)
	Mid Cap Growth	Baron Focused Growth Fund INST (BFGIX)
	Small Cap Value	MFS New Discovery Fund R4 (NDVUX)
	Small Cap Blend	Fidelity Small Cap Index Fund (FSSNX)
	Small Cap Growth	Congress Small Cap Growth Fund INST (CSMCX)
	Foreign Large Blend	Vanguard Total International Stock Index Adm (VTIAX)
	Foreign Large Growth	American Funds EuroPacific Growth Fund R6 (REGX)
	Emerging Markets	Artisan Developing World Fund I (APHYX)
	Real Estate Securities	Fidelity Real Estate Income Fund (FRIFX)
	Real Estate Securities	Vanguard Real Estate Index Fund Adm (VGSLX)
	Global Real Estate Securities	Janis Henderson Global Real Estate Fund T (JERTX)
Natural Resources Materials	Vanguard Materials Index Fund (VMIAX)	
Natural Resources Materials	Fidelity Adv Global Commodity Stock Fund Z (FIQRX)	
Moderate Allocation	T. Rowe Price Capital Appreciation Fund (PRWCX)	

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The investments used in the models are listed in the quarterly report. The contents of The Model Report are based on data sources believed to be reliable, but no representation or warranty, expressed or implied is made as to their accuracy, completeness, or correctness. We assume no responsibility for typographical errors or other inaccuracies in the content, and occasional errors may occur. Therefore, The Model Report is provided "AS IS" without any warranty of any kind. Past results are not indicative of future results. Please read prospectuses for individual mutual funds before investing. They can be found on the participant website.

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Retirement Collaborative LLC

2040 Linglestown Road, Suite 107

Harrisburg, Pennsylvania 17110

[www.retirementc.com](http://www.retirementc.com)

**Stephen G. Hetrick, CIMC®**

*Certified Investment Management Consultant®*

**hetrick@retirementc.com**

**717-545-1447 (direct)**

**717-602-1016 (fax)**

**717-503-6986 (mobile)**

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