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**Wednesday, August 15, 2018**
**10:00 a.m. to 11:35 a.m.**
**North Campus, ERC 3023**
**Toll-Free: 1-877-385-4099 Participant Passcode: 1028954#**

**Members:** Stephanie Chow (Chair), Nigel Allen, Doug Allingham, Craig Elliott (non-voting), Thorsten Koseck, Sue McGovern (non-voting), Steven Murphy, Yowsif Yakub

**Staff:** Becky Dinwoodie, Cheryl Foy

**Guests:** Leila Fiouzi & Taylor Woodward (PH&N)

### AGENDA

No.	Topic	Lead	Allocated Time	Suggested End Time
	<b>PUBLIC SESSION</b>			
<b>1</b>	<b>Call to Order</b>	Chair		
<b>2</b>	<b>Agenda (M)</b>	Chair		
<b>3</b>	<b>Conflict of Interest Declaration</b>	Chair		
<b>4</b>	<b>Chair's Remarks</b>	Chair		
<b>5</b>	<b>Approval of Minutes of Public Session of Meeting of May 31, 2018* (M)</b>	Chair		10:05 a.m.
<b>6</b>	<b>Investment Review</b>			
6.1	First Quarter Investment Review* (U)	PH&N	20	10:25 a.m.
6.2	Investment Learning – Tariffs 101* (D)	PH&N	15	10:40 a.m.
<b>7</b>	<b>Other Business</b>	Chair		
<b>8</b>	<b>Adjournment (M)</b>			10:45 a.m.
	<b>NON-PUBLIC SESSION (material not publicly available)</b>			10:50 a.m.
<b>9</b>	<b>Call to Order</b>	Chair		
<b>10</b>	<b>Conflict of Interest Declaration</b>	Chair		
<b>11</b>	<b>Approval of Minutes of Non-Public Session of Meeting of May 31, 2018* (M)</b>	Chair		10:55 a.m.
<b>12</b>	<b>Investment Review</b>			
12.1	First Quarter Investment Review – Portfolio Components* (D)	PH&N	15	11:10 a.m.

No.	Topic	Lead	Allocated Time	Suggested End Time
12.2	Market Neutral Strategy* (U)	PH&N	10	11:20 a.m.
<b>13</b>	<b>Confidential Questions (if any) from Public Session</b>	Chair	5	11:25 a.m.
<b>14</b>	<b>Other Business</b>	Chair		
<b>15</b>	<b><i>In Camera</i> Session</b>	Chair		
<b>16</b>	<b>Termination (M)</b>	Chair		11:35 a.m.

Becky Dinwoodie, Secretary

**Public Session Minutes for the Meeting of May 31, 2018  
10:00 a.m. to 10:50 a.m., ERC 3023**

**Attendees:** Stephanie Chow (Chair), Craig Elliott (non-voting), Thorsten Koseck, Susan McGovern (non-voting), Steven Murphy, Yowsif Yakub

**Staff:** Becky Dinwoodie, Cheryl Foy

**Guests:** Leila Fiouzi, Karim Hamasni and Taylor Woodward from PH&N

**Regrets:** Nigel Allen, Doug Allingham

**1. Call to Order**

The Chair called the meeting to order at 10:08 a.m.

**2. Agenda**

*Upon a motion duly made by T. Koseck and seconded by S. Murphy, the Agenda was approved as presented.*

**3. Conflict of Interest Declaration**

There were no conflict of interest declarations.

**4. Chair's Remarks**

The Chair thanked N. Allen for chairing the last meeting in her absence. She welcomed S. Murphy to his first Investment Committee meeting.

**5. Approval of Minutes of the Meeting of February 21, 2018**

*Upon a motion duly made by T. Koseck and seconded by S. Murphy, the Minutes were approved as presented.*

## 6. Investment Review

### 6.1 Fourth Quarter Investment Review

(Y. Yakub arrived at 10:11 a.m.)

L. Fiouzi reviewed the fourth quarter portfolio performance, which was +.70 above the benchmark. The annual investment management fees are currently 37 basis points. The portfolio is slightly overweight in equities.

### 6.2 Investment Learning – Cryptocurrency

K. Hamasni delivered a presentation on Blockchain and Cryptocurrencies. He started by discussing the evolution of money. Money must be durable, portable, divisible and scarce and is essentially a system of record keeping. Today, money is mostly entries on a digital register. The digital record keeping system requires a lot of trust.

#### **BITCOIN**

The goal of bitcoin is to create a decentralized digital money system. K. Hamasni reviewed the challenges of using digital files as money. The Blockchain system is a mesh network of computer nodes. A master copy of the balance tracking ledger is distributed to all of the nodes.

#### **Benefit of a Distributed Ledger:**

- Hackers would have to hack every single node in order to alter the ledger

It is the first time that we can synchronize data across a distributed network with no centralized authority. Achieving consensus through bitcoin mining is what makes the system possible. K. Hamani explained that there is a high cost to falsifying transactions, as well as a high cost to mining since it uses a lot of electricity.

#### **Bitcoin Wallet:**

- private key
- public key
- if you were to lose your private key, it would likely be impossible to recover your bitcoin

#### **Economics of Bitcoin:**

- predefined & controlled rate of supply – will not exceed 21M
- every bitcoin mining transaction requires 215KWh per hour of electricity
- there is a small fee associated with bitcoin transactions
- by 2140, when all of the bitcoin has been mined, the transaction fees will be the incentive to mine
- the transactions with the biggest fees will be given priority by miners
- supply & demand gives bitcoin its value
- 70+ market exchanges worldwide where can exchange for bitcoin

- treated by many as an investment
- Bitcoin meets 4 criteria of money: durable, portable, divisible, scarce
- However, it is very volatile – this is holding it back from becoming a currency

#### **ETHEREUM:**

- can run complete applications known as **smart contracts** in a decentralized way
- once a smart contract is deployed, contract is tamper proof
- network handles whole commercial transaction & acts as the middle man
- true global peer-to-peer commerce

#### **Three Pillars of Banking:**

- cryptocurrency meets criteria of 3 pillars of banking
- Ernst & Young monitoring this as accounting is built into the system
- K. Hamasni discussed how Blockchain technology would be useful to countries without infrastructure (e.g. Ministry of Transportation not necessary to prove vehicle ownership)
- reduces administration

#### **Risks of Cryptocurrency**

- transactions are irreversible
- private keys cannot be recovered if lost or destroyed
- technology has issues scaling up to wide use
- extreme price volatility – risky as an investment
- lack of a trusted name makes user susceptible to scams

K. Hamasni answered questions from the committee. He discussed private Blockchains, as well as the anonymity of the system and the tools that can be used to identify users.

RBC is preparing for future investing in cryptocurrency; however, today it is still too risky of an investment.

#### **7. Other Business**

#### **8. Adjournment**

*There being no other business, upon a motion duly made by T. Koseck and seconded by Y. Yakub, the public session of the meeting adjourned at 10:59 a.m.*

Becky Dinwoodie, Secretary



# Presentation to University of Ontario Institute of Technology

## Public Session

Leila Fiouzi, CFA  
Vice President & Investment Counsellor

Taylor Woodward, CFA  
Associate

August 15, 2018



**Wealth Management**  
PH&N Investment Counsel



# Summary Investment Returns

## June 30, 2018

<b>Market Value:</b>	Investment Account	\$	25,470,335.40
	Cash Account	\$	601,521.98

	Three Months %	One Year %	Three Years %	Five Years %	Since Inception*
<b>UOIT</b>	<b>3.23</b>	<b>10.38</b>	<b>7.92</b>	<b>9.96</b>	<b>8.57</b>
<i>Benchmark **</i>	<u>2.90</u>	<u>7.61</u>	<u>6.16</u>	<u>8.08</u>	<u>7.39</u>
Difference	+0.33	+2.77	+1.76	+1.88	+1.18

\*Inception date Aug 31, 2010

<b>UOIT (Cash A/C)</b>	0.42	1.38	1.06	-	1.07
<i>FTSE TMX Canada 30 Day T-Bill</i>	<u>0.31</u>	<u>0.94</u>	<u>0.63</u>	-	<u>0.70</u>
Difference	+0.11	+0.44	+0.43	-	+0.37

\*Inception date Nov 30, 2013

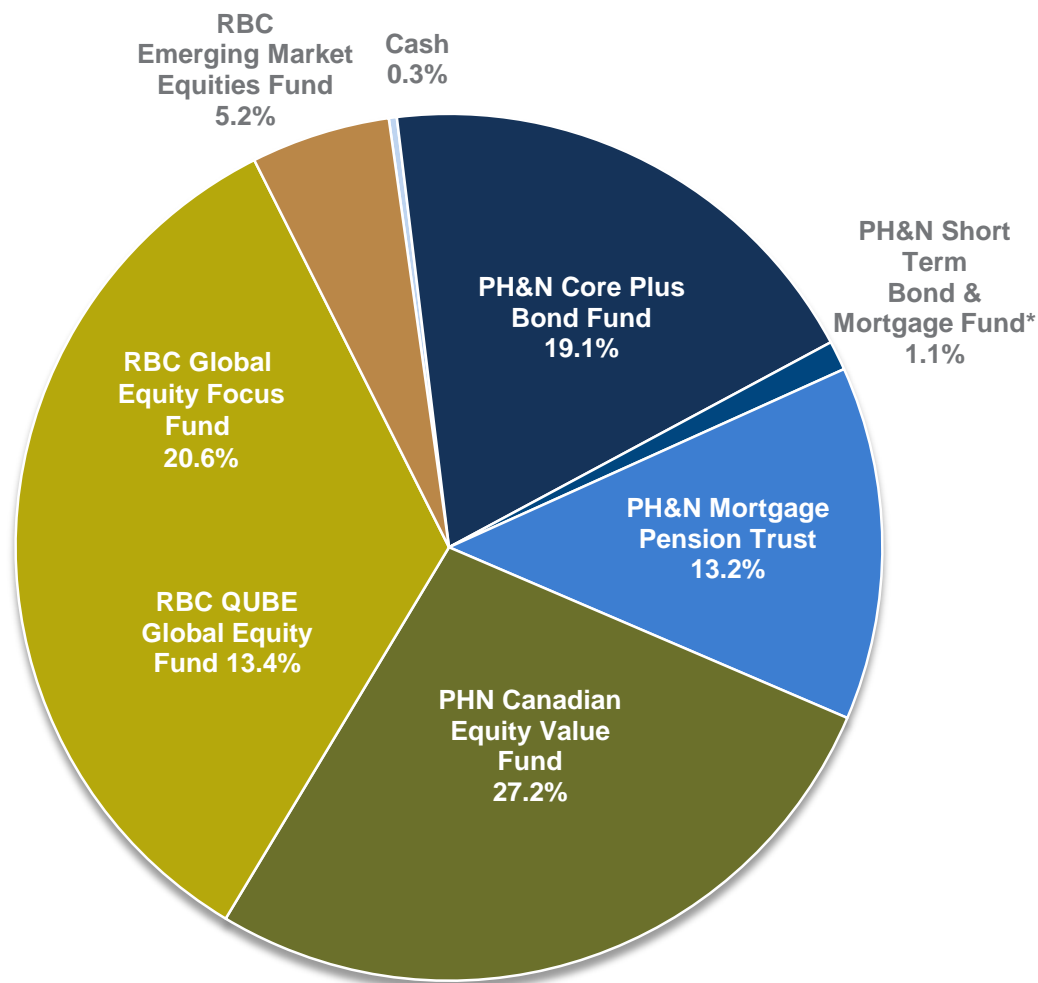
\*\* Current Custom benchmark: 20% FTSE TMX Canada Universe Bond Index; 15% FTSE TMX Canada Short Term Overall Bond Index; 27% S&P/TSX Capped Composite Index; 33% MSCI World Net Index (C\$); 5% MSCI Emerging Markets Net Index (C\$).

Note: All performance is shown gross of annual investment management fees of 37 basis points



# University of Ontario Institute of Technology

## Asset Mix as at June 30, 2018



Funds	Target Allocation (%)
Cash and Cash Equivalents	0.0
Mortgages	15.0
Core Plus Bonds	20.0
Canadian Equities	27.0
Global Equities	33.0
Emerging Markets Equities	5.0

\* Temporary position as we await drawdown for the PH&N Mortgage Pension Trust

## Tariffs 101



# Trade War Ammunition

## Tariffs:

- Universal
- Geographic filter
- Product filter

## Non-tariff barriers:

- Import quota
- Domestic subsidy
- Border thickness
- Technical barrier



## Investments:

- Restrict inward capital flows
- Restrict inward corporate acquisitions
- Sell foreign holdings  
(China: U.S. gov't bonds)

## Export restrictions:

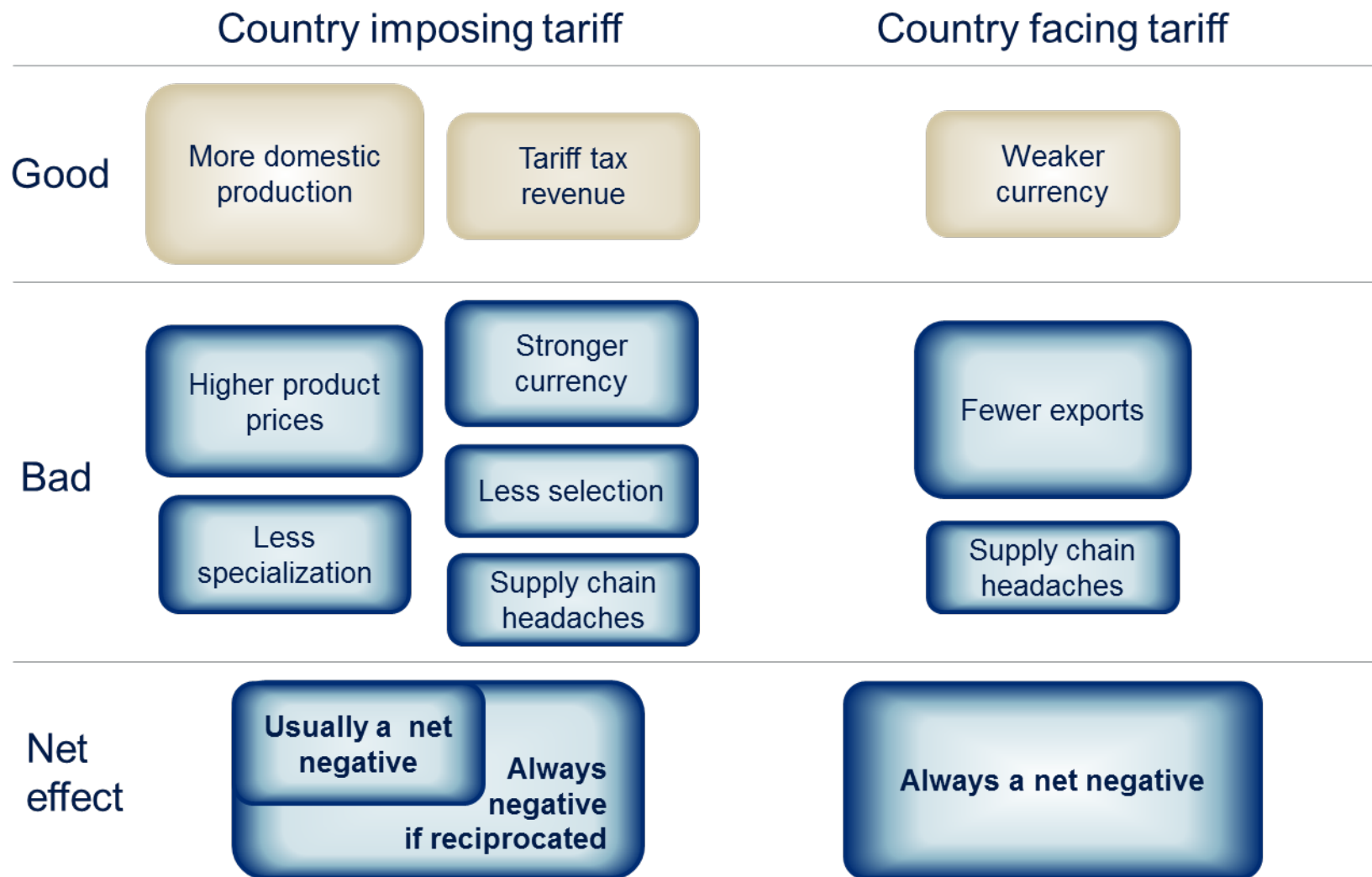
- Access to Chinese “rare Earths”
- Access to advanced U.S. tech

## Other pressure points:

- Immigration restrictions
- Constrain individual firms  
(ZTE, Huawei, U.S. firms in China)
- Access to \$ clearance system
- Gov't procurement contracts
- Exchange rate manipulation
- Inflame public sentiment  
(boycott, tourism)
- Military posturing

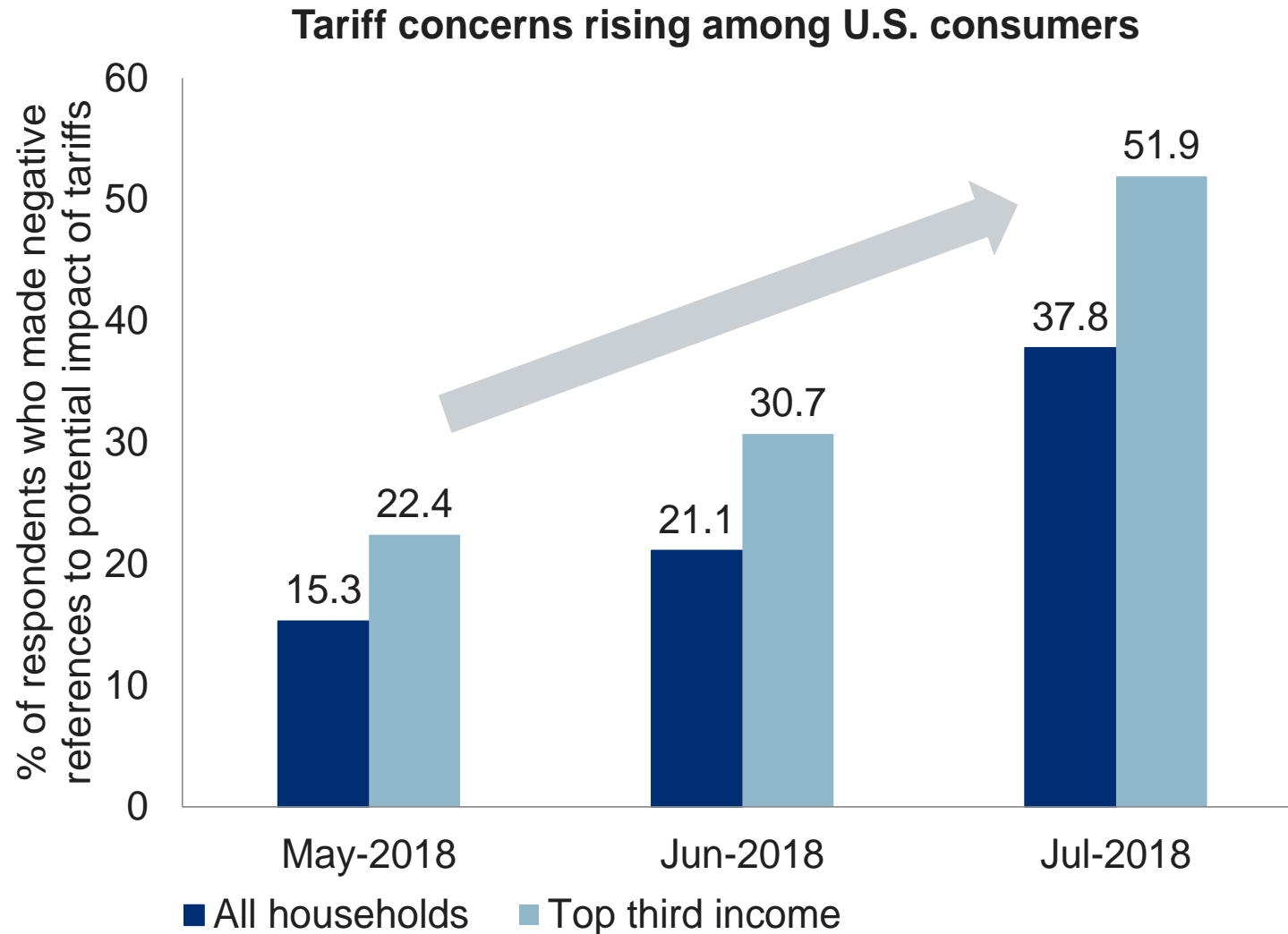
Source: RBC GAM

# Theoretical Tariff Considerations



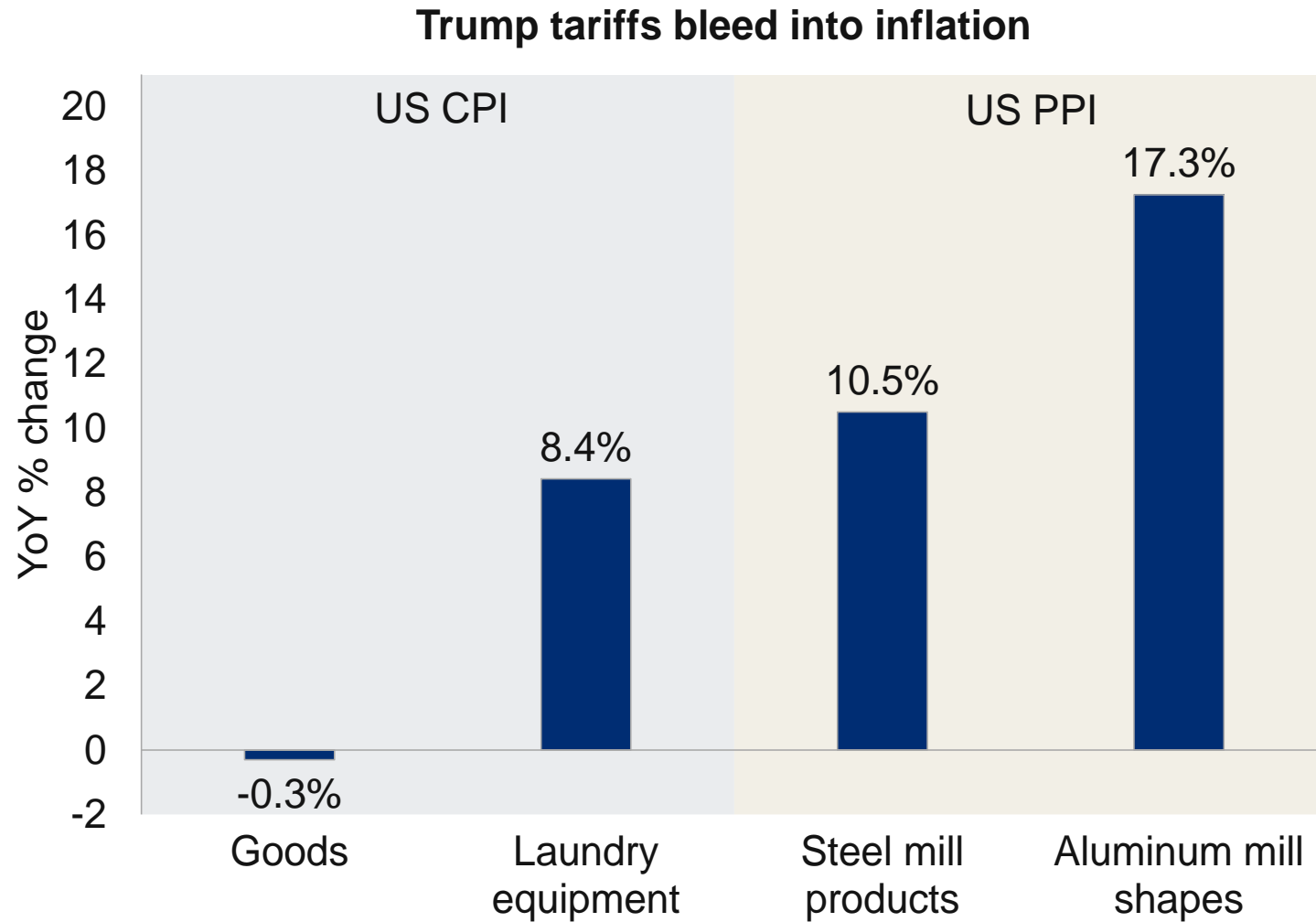
Source: RBC GAM

# Trade Tariffs Worry U.S. Consumers



Source: University of Michigan Surveys of Consumers, RBC GAM

# Trump Tariffs Increasing U.S. Product Prices Already

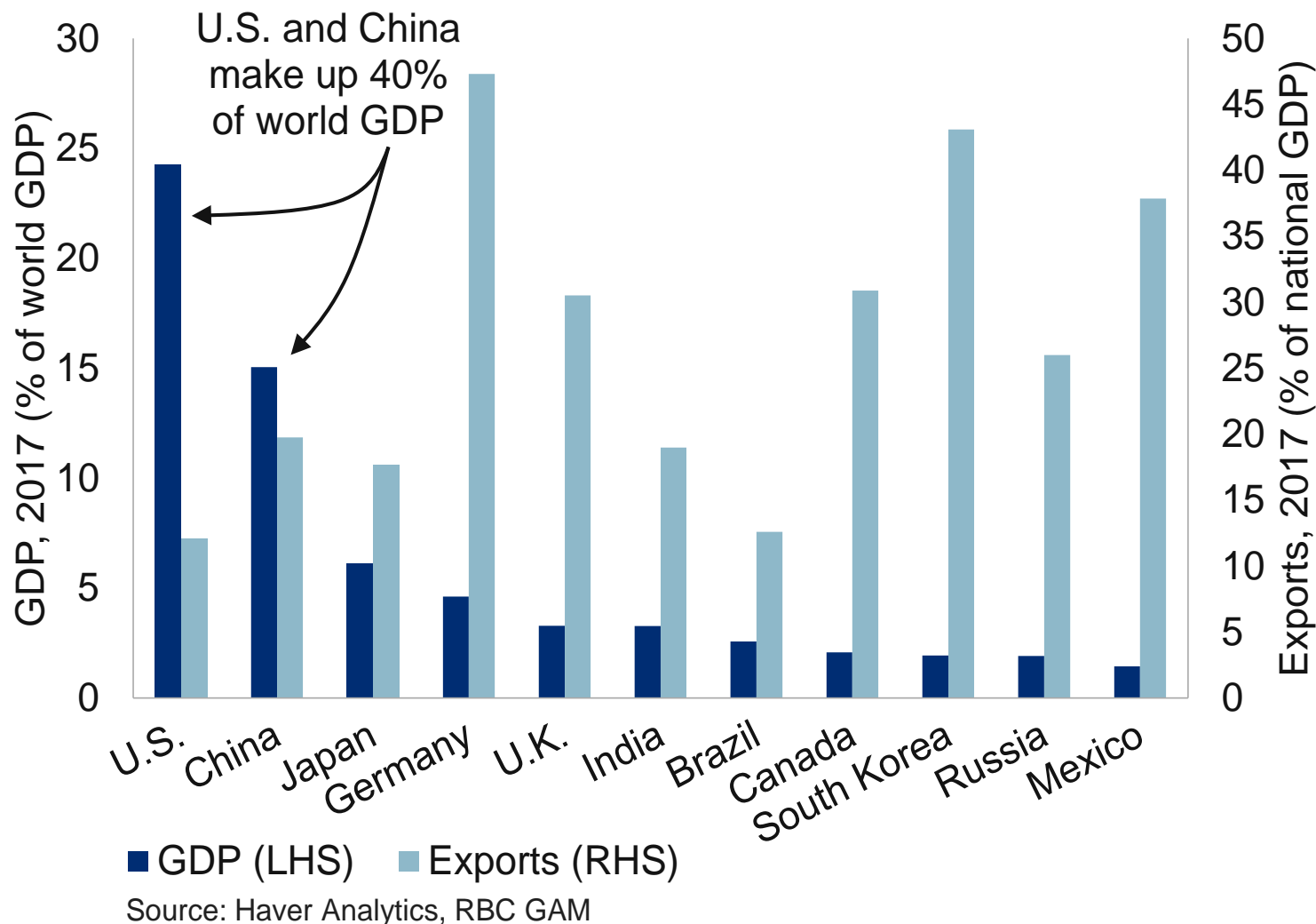


Note: Based on latest data available.

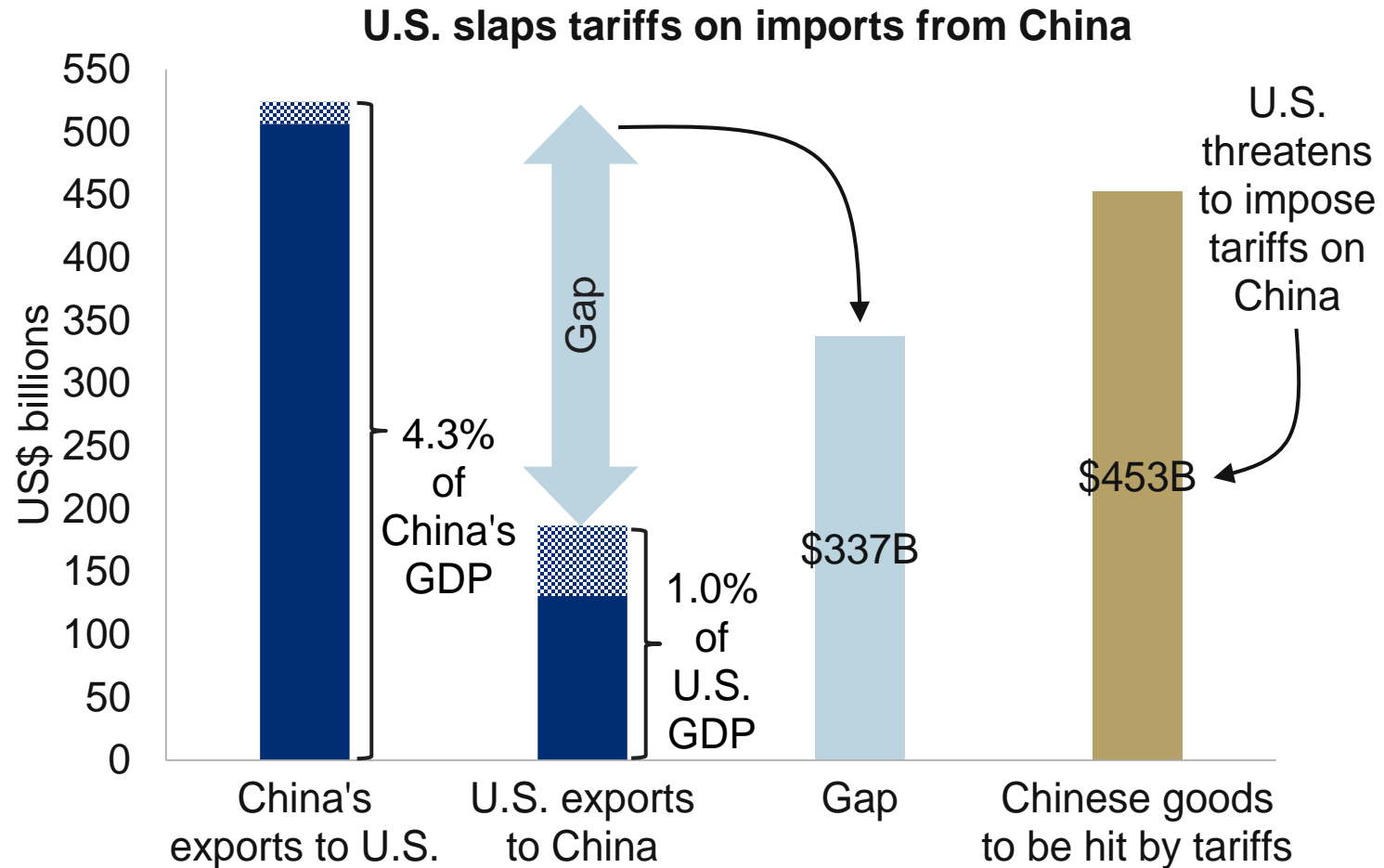
Source: Bureau of Labor Statistics, Haver Analytics, RBC GAM

# Impact of a U.S.-China Trade Spat

## U.S.-China trade war is not good



# U.S. and China Trade Tariff Threats



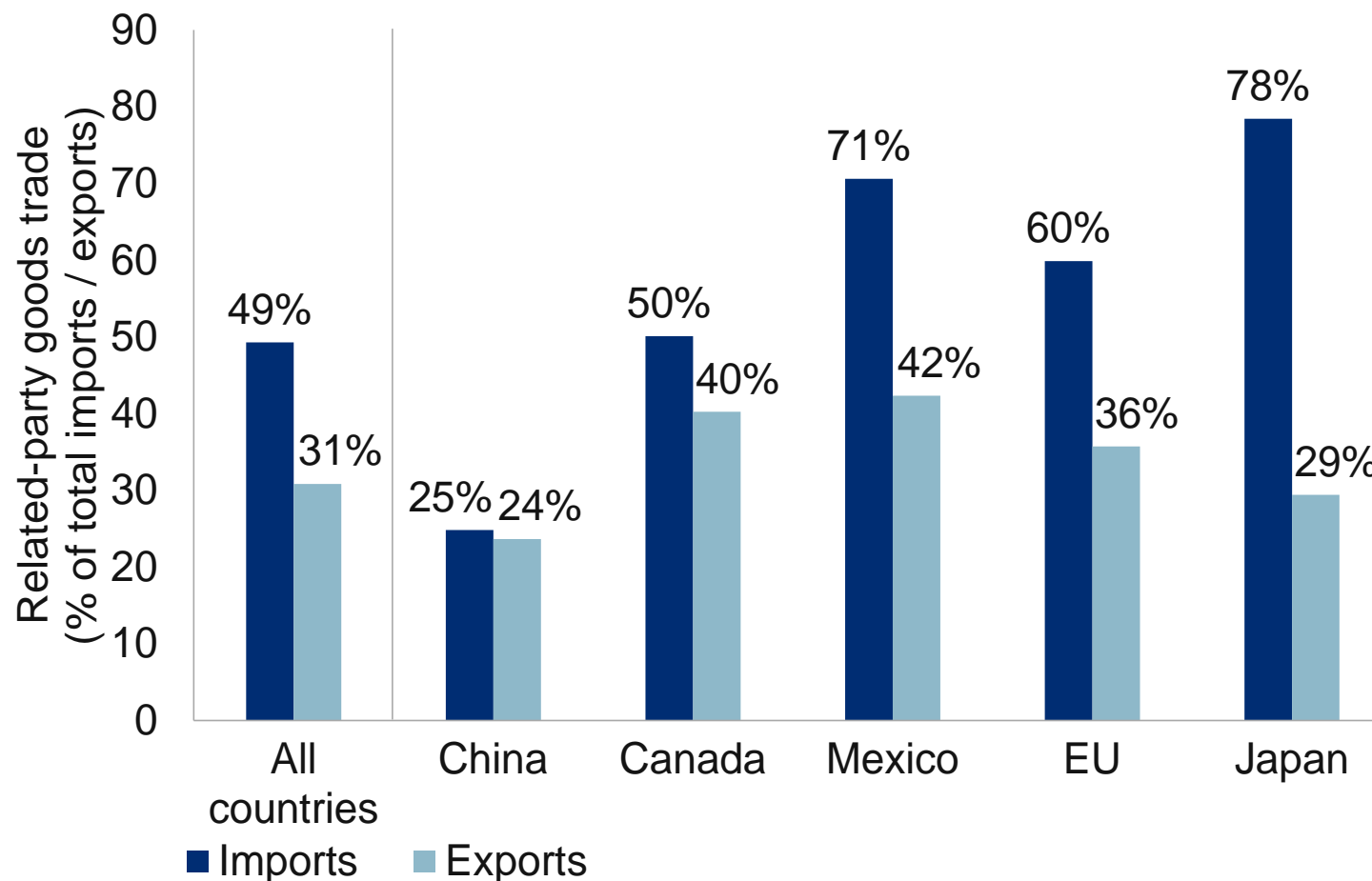
■ Services exports 
 ■ Goods exports 
 ■ Chinese goods to be hit by tariffs

Note: 2017 exports shown in chart. Tariffs on China include tariffs on steel and aluminum products, tariffs on a further \$50B, and threats of tariffs on another \$200-400B made in 2018. Source: U.S. Census Bureau, Haver Analytics, RBC GAM



# U.S. Trade Tariffs to Upend Massive Global Supply Chain

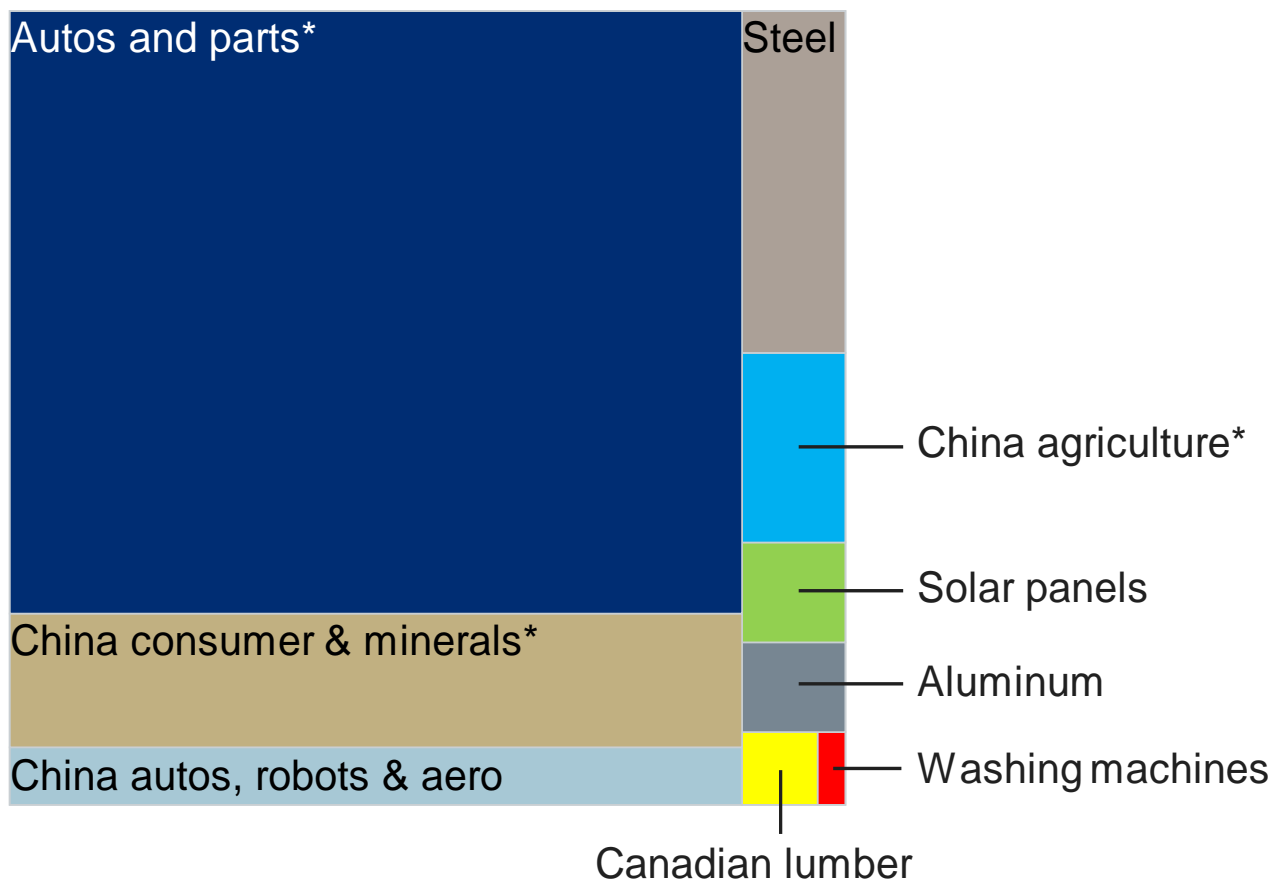
**A large part of U.S. trade occurs within multinationals**



Note: U.S. imports and exports of goods that occur between parent companies and their subsidiaries. Re-exports are excluded in both imports and exports data. Source: Census Bureau, RBC GAM

# Auto Tariffs Would be a Huge Problem

**U.S. tariffs weighted by domestic economic impact**

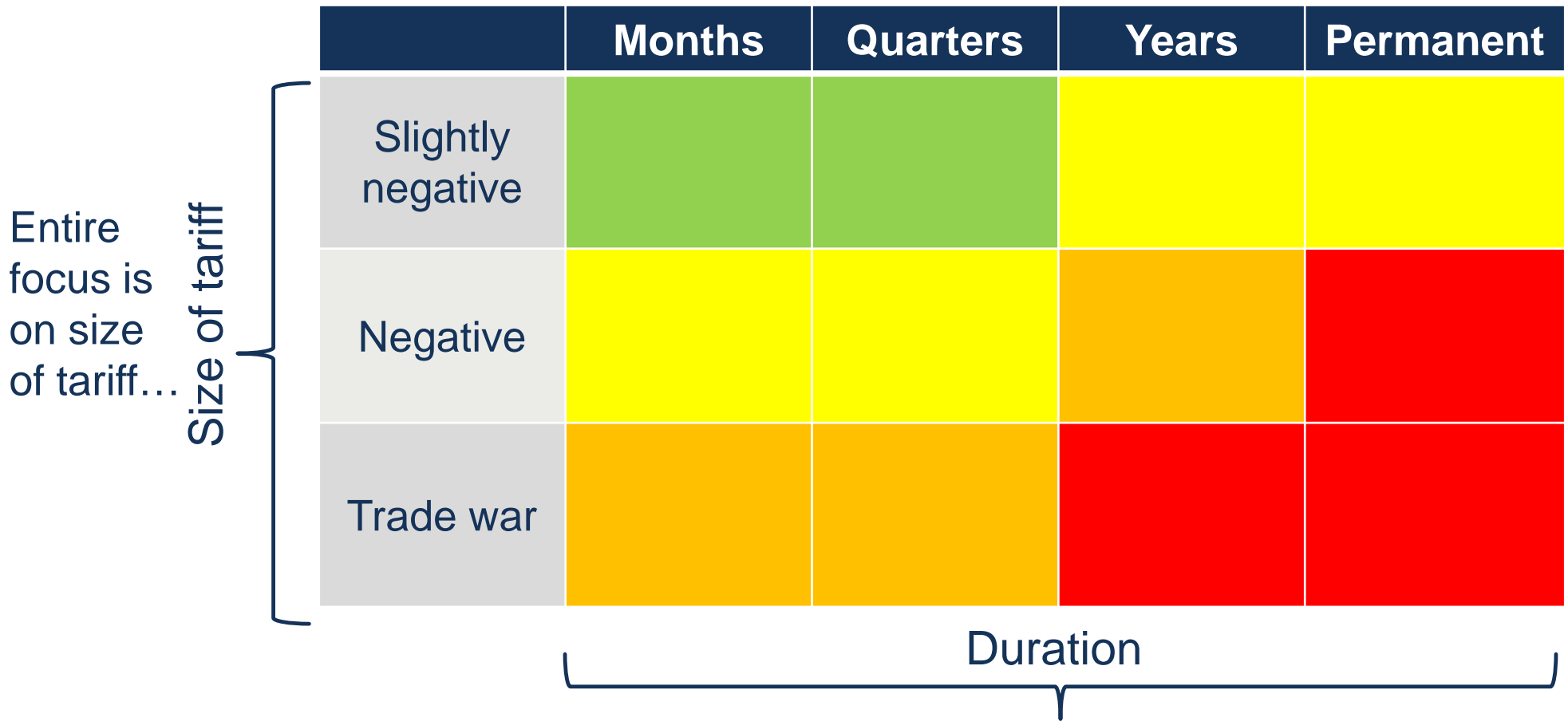


Note: \* denotes a tariff is merely proposed as opposed to enacted. Relative height of each tariff is based on the tariff rate multiplied by value of imported goods affected for each item.

Source: WSJ, U.S. Census Bureau, U.S. International Trade Commission, RBC GAM

# A Second Dimension to Tariff Math: Duration

## Heat map of cumulative tariff pain



...but how long tariffs last is just as relevant

Source: RBC GAM



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