UNITED STATES SENATE
COMMITTEE ON HEALTH, EDUCATION, LABOR, AND PENSIONS
THE COST OF PRESCRIPTION DRUGS: HOW THE DRUG DELIVERY SYSTEM AFFECTS WHAT PATIENTS PAY, PART II
OCTOBER 17, 2017
Questions for the Record – Ms. Reilly

Senator Baldwin

1. Ms. Reilly, in your testimony on October 17, you explained that higher drug prices in the United States are needed to support an "innovation ecosystem." Compared to lower prices in Europe and Canada, you argued that higher prices here provide companies the financial resources to "fuel the next generation of therapies for patients." You said that your member companies spend significantly more on research and development than marketing and that they do a great deal of basic research to develop new therapies. However, as the first chart (Table 1) from Professor William Lazonick's paper[1] makes clear, PhRMA's members in the S&P 500 are spending significantly more buying back their own stock and issuing dividends than they are on research and development. To me, this suggests that R&D isn't as important to your members as boosting the stock price.

The second chart (Table 4) provides a key piece of the puzzle. Pharmaceutical executives receive an inordinate amount of their compensation in the form of stock-based based pay. This seems to explain the broad trend of price increases that squeeze consumers—because the decision makers at your member companies are incentivized to do so by boards and shareholders who elect to pay executives in stock. I would appreciate answers to the following questions:

a. How do buybacks and dividends help the pharmaceutical industry develop "the next generation of drug therapies?"

A: Since 2000, PhRMA members alone have invested over three-quarters of a trillion dollars in the search for and development of new therapies, $600 billion of that in the United States – more R&D than any other sector, including the federal government. The incredible complexity of drug discovery and development requires a wider R&D ecosystem made up of patient organizations, academia, large and small industry players and government agencies bringing their expertise together. Whatever the business strategies of our members, it cannot be justly or fairly denied that our companies provide the lion's share – by far – of the resources and conduct the vast majority of the research by which new advances in treatment and of the therapies yet to come are made within that R&D ecosystem.

Stock buybacks and dividends are well-established business strategies often demanded by investors that return capital to investors, and make up part of an investor's total return on a stock. Investors can use those returns to fund other investments. If returns from high-risk

[1] Lazonick, William. 'US Pharma's Financialized Business Model'. Jul 13 2017. Institute for New Economic Thinking.

biopharmaceutical investments are deemed too low, they will invest those returns elsewhere. [Meaning less of the investment capital needed to fund new biotech start-up companies, engage in high-risk drug discovery, and develop the next generation of drug therapies.]

In an era when many publicly traded companies of all sectors offer buybacks and/or dividends to their shareholder investors, and given competitive capital markets, buybacks/dividends may be a sound strategy to maintain investor interest in the biopharmaceutical industry.

b. Do you recognize that pharmaceutical companies could spend billions less on buybacks and dividends and instead lower their drug prices by the same amount and still generate the same operating revenue?

A: PhRMA is committed to advancing public policies in the United States and around the world that support innovative medical research, yield progress for patients today, and provide hope for the treatments and cures of tomorrow. We have no advocacy role related to individual member company business strategies.

c. How does spending billions more on buybacks and dividends help promote "value-driven health care" which is part of your organization's mission statement?

A: PhRMA is committed to advancing public policies in the United States and around the world that support innovative medical research, yield progress for patients today, and provide hope for the treatments and cures of tomorrow. We have no advocacy role related to individual member company business strategies.

d. Does PhRMA believe its members should maximize shareholder value?

A: PhRMA represents the country's leading innovative biopharmaceutical research companies, which are devoted to discovering and developing medicines that enable patients to live longer, healthier, and more productive lives. PhRMA is committed to advancing public policies in the United States and around the world that support innovative medical research, yield progress for patients today, and provide hope for the treatments and cures of tomorrow.

e. Do you believe that a pharmaceutical executive who receives over 90 percent of their compensation in the form of stock will make increasing the stock price their top priority?

A: PhRMA's mission is to conduct effective advocacy for public policies that encourage the discovery of important, new medicines for patients by biopharmaceutical research companies. We have no involvement in business, operational, or human resource decisions of our member companies, including those related to employee compensation.

f. Why do you believe we are seeing this trend of pharmaceutical corporations providing a higher than average percentage of total direct compensation to their executives in the form of stock, as illustrated in Table 2?

A: PhRMA's mission is to conduct effective advocacy for public policies that encourage the discovery of important, new medicines for patients by biopharmaceutical research companies. We have no involvement in business, operational, or human resource decisions of our member companies, including those related to employee compensation.
As the table points out, the executive compensation practices in question are used throughout the corporate world, in keeping with policies in the tax code. It is my understanding that current tax reform legislation in the House of Representatives contains a provision that would eliminate the section of the tax code that encourages stock options as a key performance-based compensation tool.

g. Given the connection illustrated here between stock-based executive pay, stock prices, and drug price increases, do you think that the pharmaceutical industry should reconsider how their executives are compensated?

A: PhRMA represents the country's leading innovative biopharmaceutical research companies, which are devoted to discovering and developing medicines that enable patients to live longer, healthier, and more productive lives.
We are committed to advancing public policies in the United States and around the world that support innovative medical research, yield progress for patients today and provide hope for the treatments and cures of tomorrow. We have no involvement in human resource decisions at our member companies, including those related to employee compensation.

Table 1. Stock buybacks and cash dividends, 2006-2015, at 18 US pharmaceutical companies in the S&P 500 Index

Company	REV, $b	NI, $b	BB, $b	DV, $b	R&D, $b	BB/NI %	DV/NI %	(BB+DV)/ NI%	R&D/ REV%	Employees end of 2015
JOHNSON & JOHNSON	649.4	125.9	42.4	61.1	80.9	34	49	**82**	12	127,100
PFIZER	538.8	89.9	63.2	68.0	82.6	70	76	**146**	15	97,900
MERCK	365.2	63.1	29.7	43.1	69.3	47	68	**115**	19	68,000
ABBOTT LABORATORIES	285.1	40.6	13.1	20.8	26.6	32	51	**84**	9	74,000
ELI LILLY	209.2	30.9	4.1	20.7	45.0	13	67	**80**	22	41,275
BRISTOL-MYERS SQUIBB	183.8	34.5	4.6	23.3	39.3	13	67	**81**	21	25,000
AMGEN	167.0	44.8	32.1	7.3	36.2	72	16	**88**	22	17,900
BAXTER INTERNATIONAL	129.6	18.8	11.8	7.5	9.4	63	40	**102**	7	50,000
GILEAD SCIENCES	114.4	46.5	27.0	1.9	17.1	58	4	**62**	15	8,000
ALLERGAN	60.7	2.0	0.5	0.2	6.2	23	10	**33**	10	31,200
BIOGEN IDEC	57.0	14.6	14.6	0.0	13.8	100	0	**100**	24	7,350
MYLAN	56.5	3.0	2.4	0.5	5.0	79	16	**96**	9	35,000
CELGENE	44.6	8.2	13.7	0.0	15.2	166	0	**166**	34	6,971
PERRIGO	27.0	2.2	0.3	0.3	1.0	14	13	**27**	4	13,500
ENDO INTERNATIONAL PLC	21.0	-2.1	1.0	0.0	1.5	-49	0	**-49**	7	6,406
REGENERON PHARMACEUTICALS	12.1	1.5	0.0	0.0	6.4	0	0	**0**	53	4,300
ALEXION PHARMACEUTICALS	9.6	1.7	0.7	0.0	2.3	42	0	**42**	24	2,924
VERTEX PHARMACEUTICALS	6.6	-4.3	0.0	0.0	6.9	0	0	**0**	104	1,950
Totals, 18 pharma companies, 2006-2015	**2,938**	**522**	**261**	**255**	**465**	**50**	**49**	**99**	**16**	**618,776**
Totals, 459 S&P500 companies, 2006-2015	89,488	7,364	3,941	2,703	1,824	54	37	90	2.0	24,840,743
18 pharma as % of 459 S&P 500 = 3.9%	**3.3%**	**7.1%**	**6.6%**	**9.4%**	**25.5%**					**2.5%**

REV=revenues; NI=Net Income; BB=stock buybacks (aka repurchases); DV=cash dividends; R&D=research and development expenditures

Notes: a) The pharmaceutical business of Abbott Laboratories became AbbVie on January 1, 2013. b) In November 2012, US company Watson Pharmaceuticals acquired the Swiss company Actavis, taking its name. In October 2013, Actavis acquired the Irish company Warner Chilcott and changed the merged company's name to Actavis, plc, headquartered in Ireland. In June 2015 Actavis, plc, domiciled in Ireland, acquired Allergan, and changed the merged company's name to Allergan, Plc. c) In February 2014, Endo acquired the Canadian firm Paladin Labs, established global headquarters in Ireland, and was renamed Endo International, plc.

Source: S&P Compustat database.

Table 2. 500 highest-paid executives, US corporations, with proportions of mean total direct compensation from stock options and stock awards, and representation of pharma executives among the top500, 2006-2015

	All US Corporations				Pharmaceutical Corporations				
	TDC, $m	SO/ TDC%	SA/ TDC%	(SO+SA)/ TDC%	TDC, $m	SO/ TDC%	SA/ TDC%	(SO+SA)/ TDC%	No. of pharma execs
2006	**24.7**	58	18	76	**24.7**	51	32	83	23
2007	**30.0**	59	20	78	**23.0**	68	15	84	16
2008	**19.8**	51	24	75	**22.4**	69	13	82	20
2009	**14.7**	41	25	66	**19.3**	44	20	64	31
2010	**18.6**	41	28	69	**19.7**	44	36	80	25
2011	**19.8**	42	32	75	**18.6**	61	17	78	21
2012	**30.7**	43	40	83	**31.4**	63	25	88	26
2013	**26.5**	46	34	81	**33.9**	67	24	91	37
2014	**30.5**	47	35	83	**42.4**	71	19	90	42
2015	**32.2**	47	37	84	**44.7**	56	33	89	36

TDC=total direct compensation; SO=realized gains from exercising stock options; SA=realized gains from vesting of stock awards

Source: S&P ExecuComp database.

Table 4. Six highest-compensated pharma executives, 2006-2015, with total compen-sation in millions of dollars (stock-based pay as % of total compensation)

	#1	#2	#3	#4	#5	#6
	John W. Jackson	Kenneth E. Goodman	Sol J. Barer	Howard Solomon	Robert A. Essner	John C. Martin
2006	**CELGENE**	**FOREST LABS**	**CELGENE**	**FOREST LABS**	**WYETH**	**GILEAD SCIENCES**
	$84.5m (96%)	$78.2m (99%)	$46.1m (94%)	$40.9m (96%)	$34.1m (73%)	$32.5m (92%)
	Miles D. White	David E. I. Pyott	John C. Martin	Richard A. Gonzalez	Henri A. Termeer	Norbert W. Bischofberger
2007	**ABBOTT**	**ALLERGAN**	**GILEAD SCIENCES**	**ABBOTT**	**GENZYME**	**GILEAD SCIENCES**
	$47.8m (79%)	$46.0m (93%)	$35.6m (93%)	$30.7m (88%)	$24.7m (85%)	$24.2m (95%)
	Robert J. Hugin	Sol J. Barer	John C. Martin	Miles D. White	William C. Weldon	James C. Mullen
2008	**CELGENE**	**CELGENE**	**GILEAD SCIENCES**	**ABBOTT**	**J & J**	**BIOGEN**
	$74.6m (97%)	$59.3m (94%)	$33.1m (91%)	$30.3m (67%)	$25.6m (11%)	$24.9m (84%)
	Fred Hassan	John C. Martin	Robert J. Bertolini	Carrie Smith Cox	Thomas Paul Koestler	Sol J. Barer
2009	**MERCK**	**GILEAD SCIENCES**	**MERCK**	**MERCK**	**MERCK**	**CELGENE**
	$91.3m (61%)	$60.4m (94%)	$58.5m (17%)	$46.2m (40%)	$38.9m (46%)	$31.4m (87%)
	John C. Martin	David E. I. Pyott	Martine A. Rothblatt	William C. Weldon	James C. Mullen	Christopher B. Begley
2010	**GILEAD SCIENCES**	**ALLERGAN**	**UNITED THERAPEUTICS**	**J & J**	**BIOGEN**	**HOSPIRA**
	$42.7m (91%)	$35.3m (87%)	$31.6m (89%)	$25.4m (17%)	$24.6m (93%)	$23.6m (88%)
	John C. Martin	David E. I. Pyott	William C. Weldon	Jonah Shacknai	Miles D. White	Robert L. Parkinson, Jr.
2011	**GILEAD SCIENCES**	**ALLERGAN**	**J & J**	**MEDICIS**	**ABBOTT**	**BAXTER**
	$43.2m (90%)	$35.8m (86%)	$27.8m (28%)	$25.3m (38%)	$22.6m (45%)	$22.6m (75%)
	George D. Yancopoulos	John C. Martin	Robert J. Coury	Leonard S. Schleifer	Leonard Bell	David E. I. Pyott
2012	**REGENERON**	**GILEAD SCIENCES**	**MYLAN**	**REGENERON**	**ALEXION**	**ALLERGAN**
	$129.8m (98%)	$85.5m (94%)	$68.6m (69%)	$52.5m (93%)	$41.6m (91%)	$41.4m (88%)
	John C. Martin	Paul M. Bisaro	John F. Milligan	George D. Yancopoulos	Leonard S. Schleifer	Robert J. Hugin
2013	**GILEAD SCIENCES**	**ALLERGAN**	**GILEAD SCIENCES**	**REGENERON**	**REGENERON**	**CELGENE**
	$168.9m (97%)	$113.2m (95%)	$79.7m (97%)	$74.5m (96%)	$73.5m (96%)	$46.4m (81%)
	Leonard Bell	John C. Martin	Leonard S. Schleifer	Robert J. Hugin	John F. Milligan	Rajat Rai
2014	**ALEXION**	**GILEAD SCIENCES**	**REGENERON**	**CELGENE**	**GILEAD SCIENCES**	**AKORN**
	$195.8m (98%)	$192.8m (97%)	$101.8m (97%)	$96.3m (89%)	$89.5m (97%)	$75.8m (97%)
	John C. Martin	George D. Yancopoulos	John F. Milligan	Martine A. Rothblatt	Norbert W. Bischofberger	Rajat Rai
2015	**GILEAD SCIENCES**	**REGENERON**	**GILEAD SCIENCES**	**UNITED THERAPEUTICS**	**GILEAD SCIENCES**	**AKORN**
	$232.0m (98%)	$104.5m (97%)	$103.4m (97%)	$96.7m (98%)	$95.5m (98%)	$67.3m (97%)

Source: S&P ExecuComp database.