PPI Data Visualization App

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PPI Data Visualization App

- Web app built utilizing R/Shiny (open-sourced publically available software)

- Developed by analysts and users

- Supplemental app to official index review system

- Emphasizes graphical representations of data to highlight decision-making opportunities

- Allows users to improve index precision and aids in workflow prioritization prior to index release

High-level index review
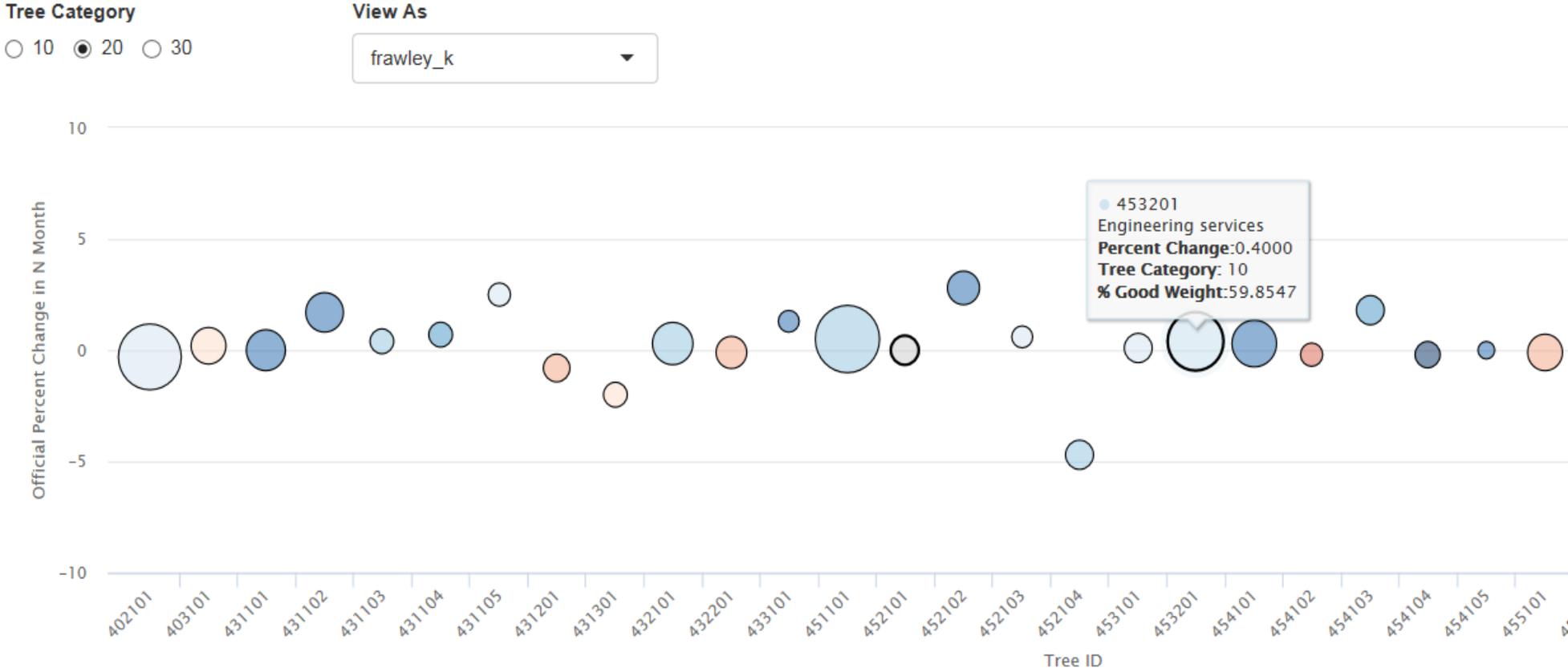
Sub-aggregate level index review

Publication	Index Movement	Good Weight		

PPI Index Code	Publication Title	PS	PI	RC	PS4	PI4	RC4	Publishing
523110523110 N23N1	Investment banking and securities dealing	P	P	Y	P	P	Y	✔ Yes
5231105231102 G20N1	Dealer transactions	P	P	Y	P	P	Y	✔ Yes
523110523110201 G20N1	Dealer transactions, equity securities	P	P	Y	P	P	Y	✔ Yes
523110523110202 G20N1	Dealer transactions, debt securities and all other trading	P	P	Y	P	P	Y	✔ Yes
52311052311020201 G20N1	Dealer transactions, Treasury securities	P	P	Y	P	P	Y	✔ Yes
52311052311020202 G20N1	Dealer transactions, all other trading	P	P	Y	P	P	Y	✔ Yes
5231105231103 G20N1	Investment banking services	P	P	Y	P	P	Y	✔ Yes
52311052311030101 G20N1	Investment banking services, advisory services	P	P	Y	P	P	Y	✔ Yes
52311052311030102 G20N1	Investment banking services, underwriting services	P	P	Y	P	P	Y	✔ Yes
5231105231104 G20N1	Other securities dealing services	P	P	Y	P	P	Y	✔ Yes
523110523110P G20N1	Primary services	P	P	Y	P	P	Y	✔ Yes
523110523110S G20N1	Secondary services	P	P	Y	P	P	Y	✔ Yes
523110523110SM1 G20N1	Other receipts	P	P	Y	P	P	Y	✔ Yes
523110523110SS G20N1	Secondary services	P	P	Y	P	P	Y	✔ Yes
523110523110M1 G20N1	Miscellaneous receipts	P	P	Y	P	P	Y	✔ Yes
523110523110MM1 G20N1	Miscellaneous receipts	P	P	Y	P	P	Y	✔ Yes

Sub-aggregate level index review cont.

| Heaviest Weighted	Largest Increases	Largest Decreases	
Item Code	**LTR % Change**	**NPS**	**% of Tree Weight**
523110C106A01	6.3991785	G	3.8303214
523110C236A01	5.9744744	G	2.1993632
523110C055A01	5.1416592	G	2.8828450
523110C055A03	3.7388840	G	1.5186037
523110C055A02	2.5643247	G	1.6105424
523110C055A04	0.9263643	G	3.8097451
523110C013A04	-0.1512958	W	3.5481556
523110C013A02	9.8795761	G	3.6826516
523110C023A03	1.8669517	G	2.2037844
523110C013A03	2.0480805	W	4.2603259
523110C023A01	6.1805948	G	2.4107504
523110C013A01	5.5093719	W	3.7449976
523110C058A04	4.7092601	W	2.4305893
523110C058A03	3.6240892	W	3.6203078
523110C058A02	10.6506657	W	4.4883364
523110C058A05	8.4501215	W	2.1633288
523110C058A06	8.9009459	W	0.6799576

Item-level review
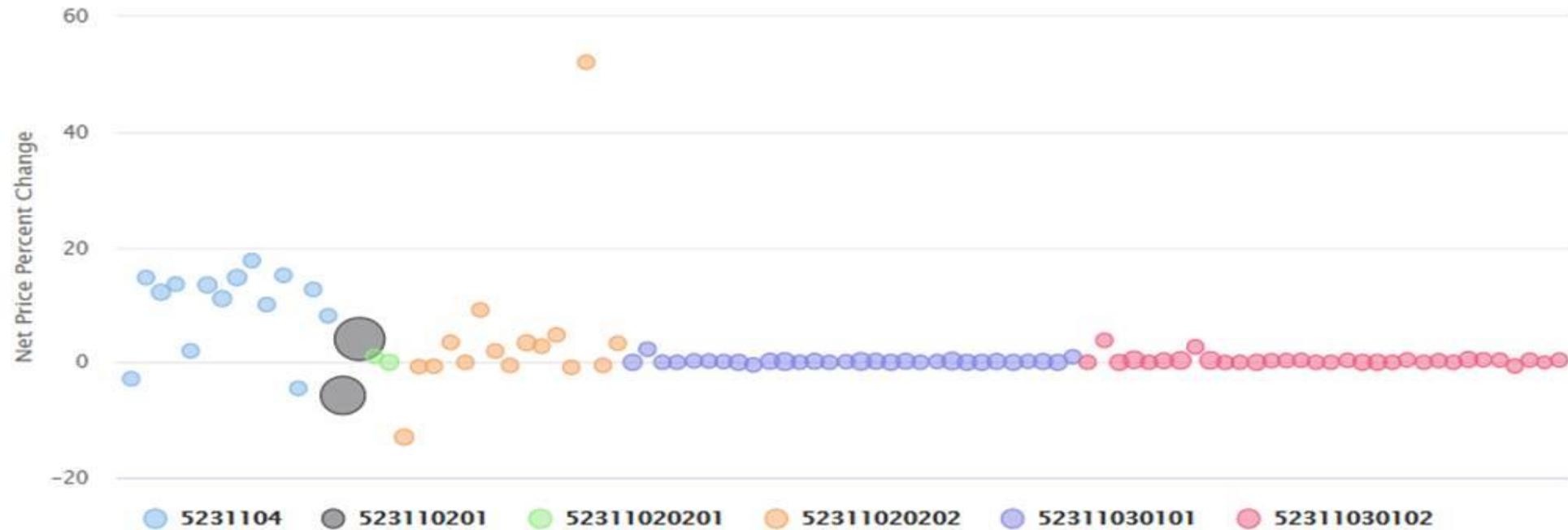
Timeline: External comparison

Comparison of PPI and IPP Pharmaceutical Indexes

Legend:
- PPI – 325412 | Pharmaceutical preparation manufacturing
- IPP – EIUIY3254 | Pharmaceutical and medicine manufacturing
- IPP – EIUIZ3254 | Pharmaceutical and medicine manufacturing
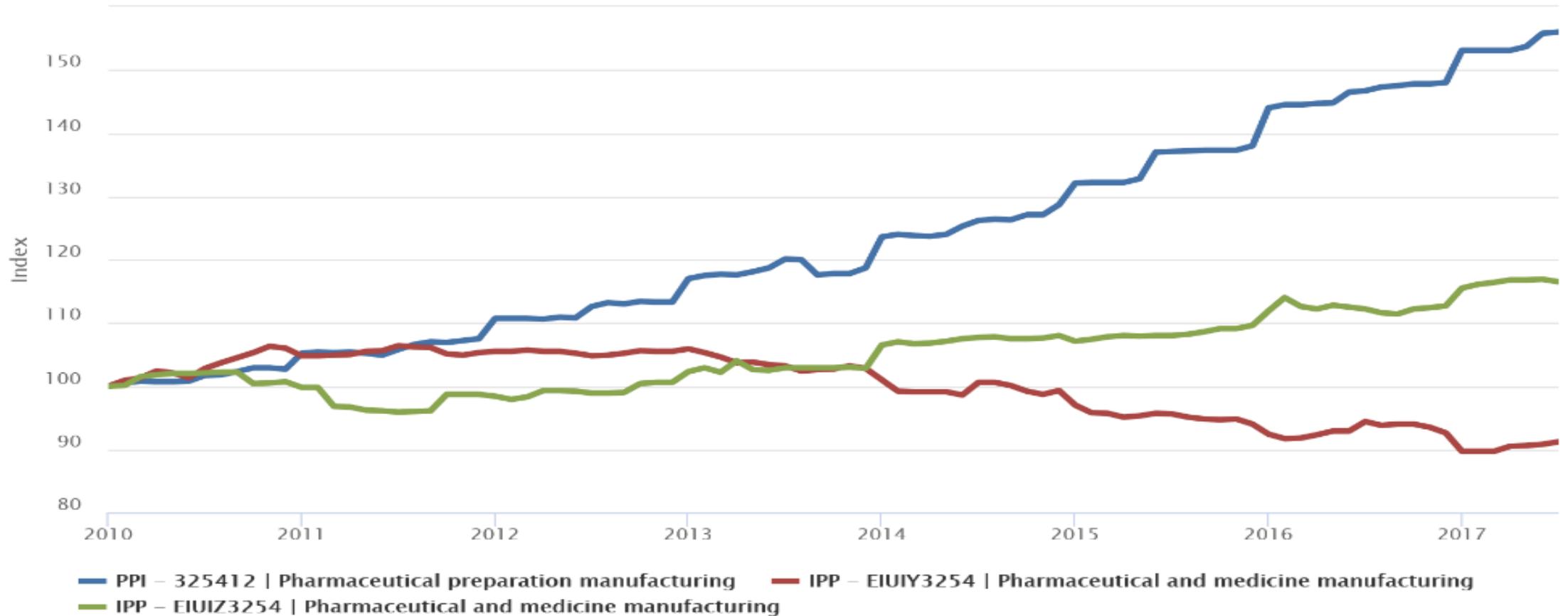
Timeline: Internal comparison
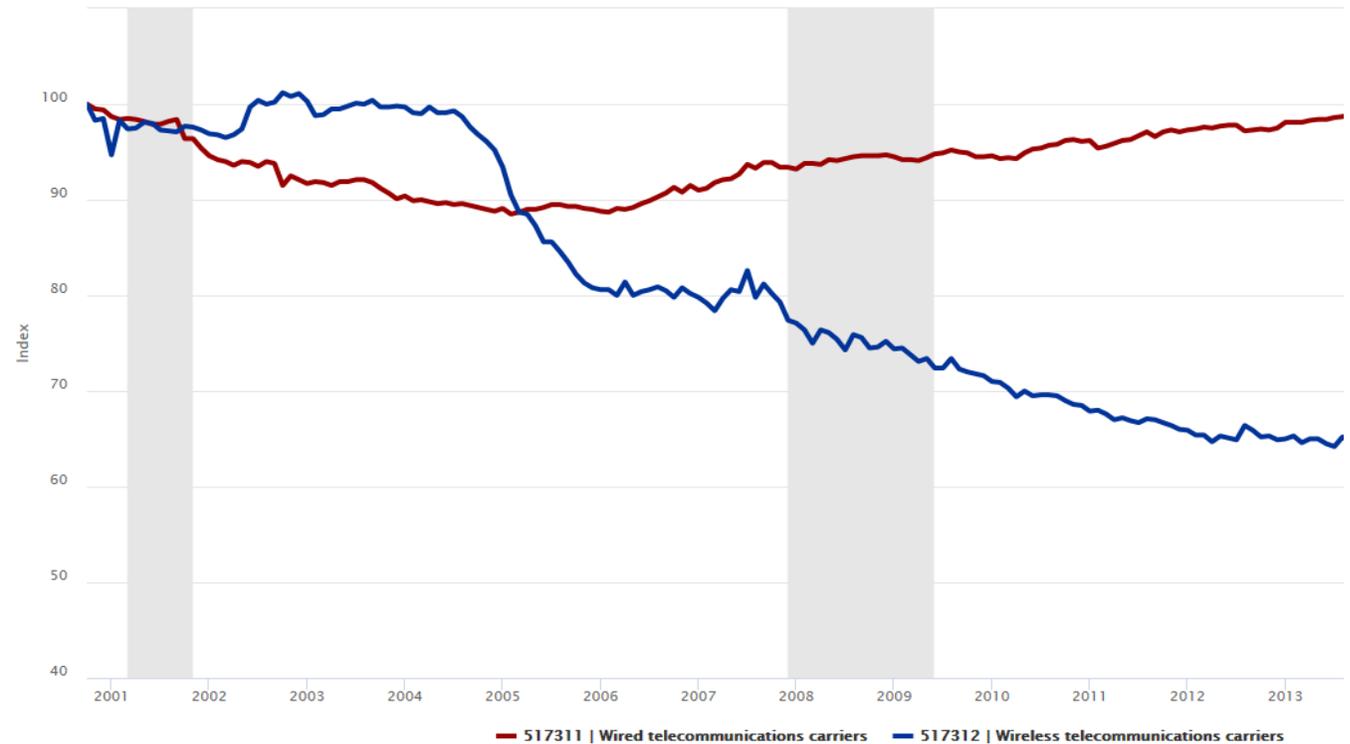
Demo

Development lifecycle

- Developed using software lifecycle best practices
  - ▶ Business modeling
  - ▶ Code review and code documentation
  - ▶ Testing- black/white box, SQL review, stress/load, security
  - ▶ Requirements documentation
  - ▶ Configuration management
  - ▶ Help documentation
- Quick and defined iterations

Future steps

■ Work with other Offices to incorporate the app or elements of the app into their review processes.

■ Create an R package allowing users to structure their data to create similar outputs

▶ Data users will be provided instructions on how to structure their data.

▶ Data users will need to build an interface to house the visuals, if desired.

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