

# Japan METI Biotechnology Index Concept Discussion

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# Japan METI Biotechnology Index: Methodology (Concept)

- The Japan METI Biotechnology Index is designed to track the performance of Japanese companies engaged in biotechnology businesses.
- **Applicable Marketplaces:**
  - TSE 1st Section
  - TSE 2nd Section
  - TSE Mothers
  - JASDAQ Standard
  - JASDAQ Growth
- **Index Construction:**
  - **Step 1:** Selected all stocks in the starting universe with GICS classification as Biotechnology (35201010).
  - **Step 2:** Rank all stocks classified under GICS subindustries Pharmaceuticals (35202010) and Life Sciences Tools & Services (35203010) by their latest fiscal year R&D Expense/Sales ratios in descending order. The top half stocks with the highest R&D Expense/Sales ratios are selected subject to the following rebalancing buffer rules:
    - All stocks (current constituents and new candidates) ranked in the top 40% by R&D Expense/Sales ratios are selected first.
    - Current constituents ranked between the top 40% and 60% are then selected in the order of their R&D Expense/Sales ratio until the number of total selected stocks reaches half of the universe in Step 2.
    - If at this stage, the number of total selected stocks is still less than half of the universe in Step 2, new candidates are selected in the order of their R&D Expense/Sales ratios.
  - **Step 3:** Stocks selected in Step 1 & 2 are combined to form the Japan METI Biotechnology Index.

Source: S&P Dow Jones Indices.

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# Japan METI Biotechnology Index: Methodology

- **Weighting Schemes:** constituents are float cap weighted. Total weights for pharmaceutical companies listed on the first and second sections of TSE are capped at 30%. Stock weights are capped at 3%.
- The index is rebalanced semi-annually. The reference dates of the rebalance are the last trading day of February and August each year. The effective date is the last trade day of the following month after market close.

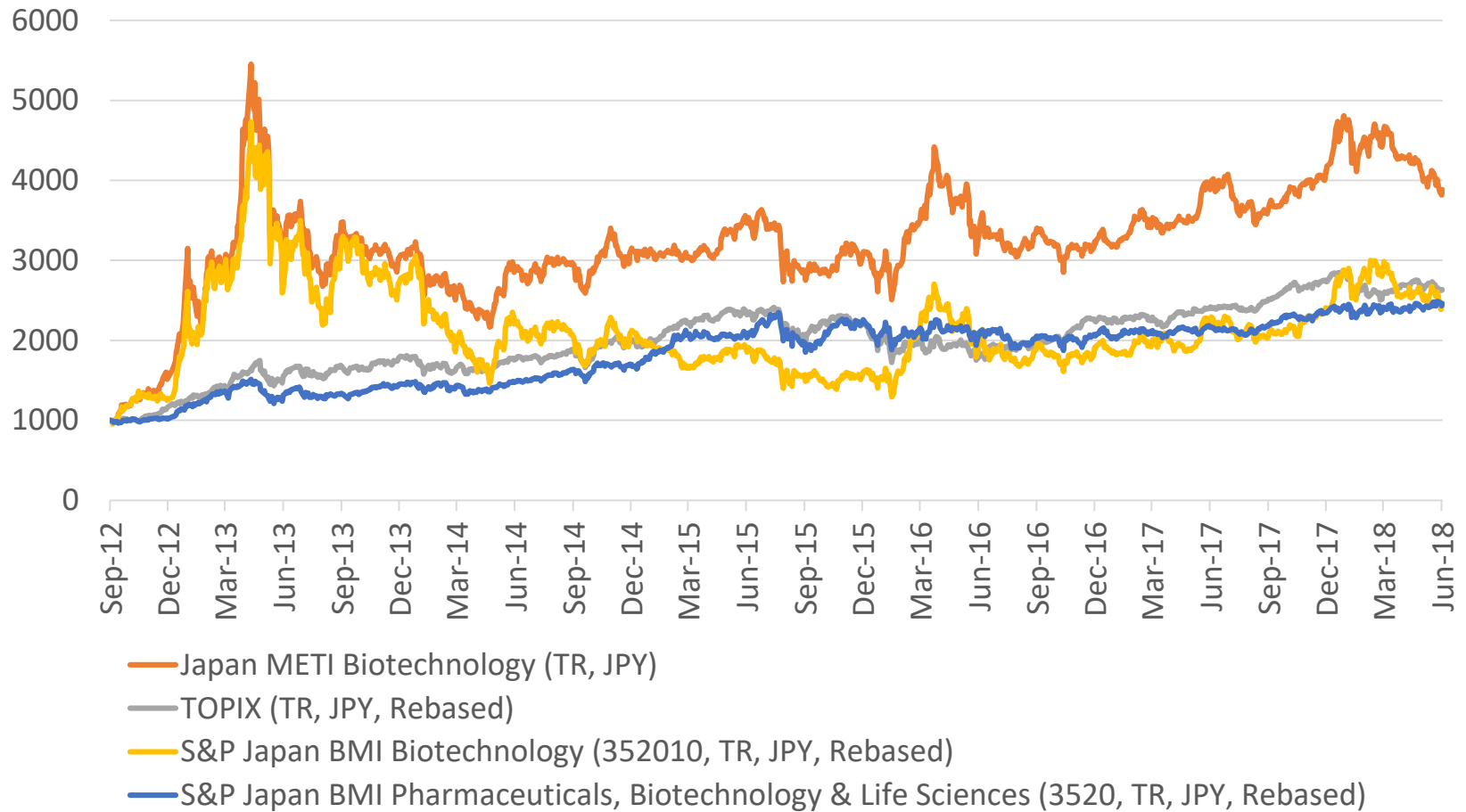
Source: S&P Dow Jones Indices.

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# Japan METI Biotechnology Index: Growth of Wealth

Growth of Wealth



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Source: S&P Dow Jones Indices. Data as of June.29, 2018 based on total returns in JPY. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

# Japan METI Biotechnology Index: Risk & Return Profile

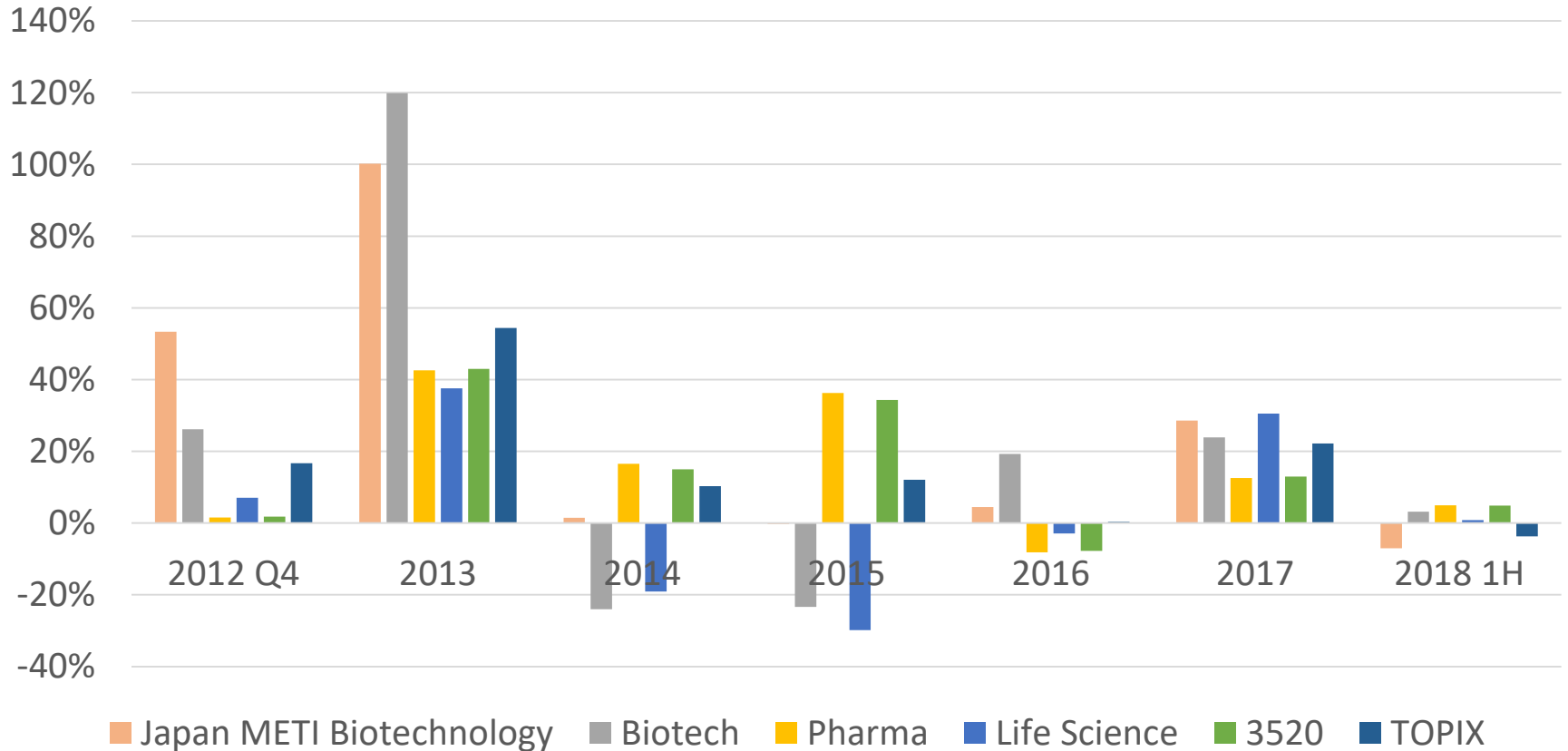
Period	Japan METI Biotechnology	S&P Japan BMI				TOPIX	Japan METI Biotechnology	S&P Japan BMI			
		Biotech	Pharma	Life Science	3520			Biotech	Pharma	Life Science	3520
<b>Annualized Return (TR, JPY)</b>							<b>Annualized Excess Return (TR, JPY)</b>				
1-Yr	-2.8%	7.3%	13.8%	14.3%	13.6%	9.7%	-12.5%	-2.4%	4.1%	4.7%	3.9%
3-Yr	3.7%	9.8%	6.1%	-0.1%	6.2%	4.2%	-0.5%	5.6%	1.9%	-4.3%	2.0%
5-Yr	5.6%	-1.6%	13.9%	-10.0%	13.3%	11.1%	-5.5%	-12.7%	2.8%	-21.0%	2.2%
Since 9/28/12	26.6%	17.0%	17.2%	1.1%	16.9%	18.3%	8.3%	-1.4%	-1.1%	-17.2%	-1.4%
<b>Annualized Volatility</b>							<b>Annualized Tracking Error</b>				
1-Yr	23.2%	29.5%	14.7%	24.0%	14.7%	12.7%	18.9%	26.8%	9.8%	20.3%	9.7%
3-Yr	29.6%	37.6%	22.0%	30.9%	22.0%	20.3%	22.1%	31.5%	13.5%	23.9%	13.4%
5-Yr	30.6%	40.9%	20.4%	34.3%	20.4%	19.3%	23.9%	35.4%	12.2%	29.3%	12.1%
Since 9/28/12	39.1%	47.5%	20.6%	38.9%	20.6%	20.0%	34.1%	43.0%	12.5%	34.9%	12.4%
<b>Risk Adjusted Return</b>							<b>Information Ratio</b>				
1-Yr	-0.12	0.25	0.94	0.60	0.92	0.76	-0.66	-0.09	0.42	0.23	0.41
3-Yr	0.13	0.26	0.28	0.00	0.28	0.21	-0.02	0.18	0.14	-0.18	0.15
5-Yr	0.18	-0.04	0.68	-0.29	0.65	0.57	-0.23	-0.36	0.23	-0.72	0.18
Since 9/28/12	0.68	0.36	0.84	0.03	0.82	0.91	0.24	-0.03	-0.09	-0.49	-0.11
<b>Rolling 12-Month Max Drawdown</b>							<b>Beta</b>				
Since 9/28/12	-48.9%	-62.8%	-15.6%	-53.0%	-15.3%	-23.3%	0.96	1.00	0.83	0.87	0.84

## S&P Dow Jones Indices

Source: S&P Dow Jones Indices. Data as of June 29, 2018 based on total returns in JPY. 3520: S&P Japan BMI Pharmaceuticals, Biotechnology & Life Sciences Index. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

# Japan METI Biotechnology Index: Annual Returns

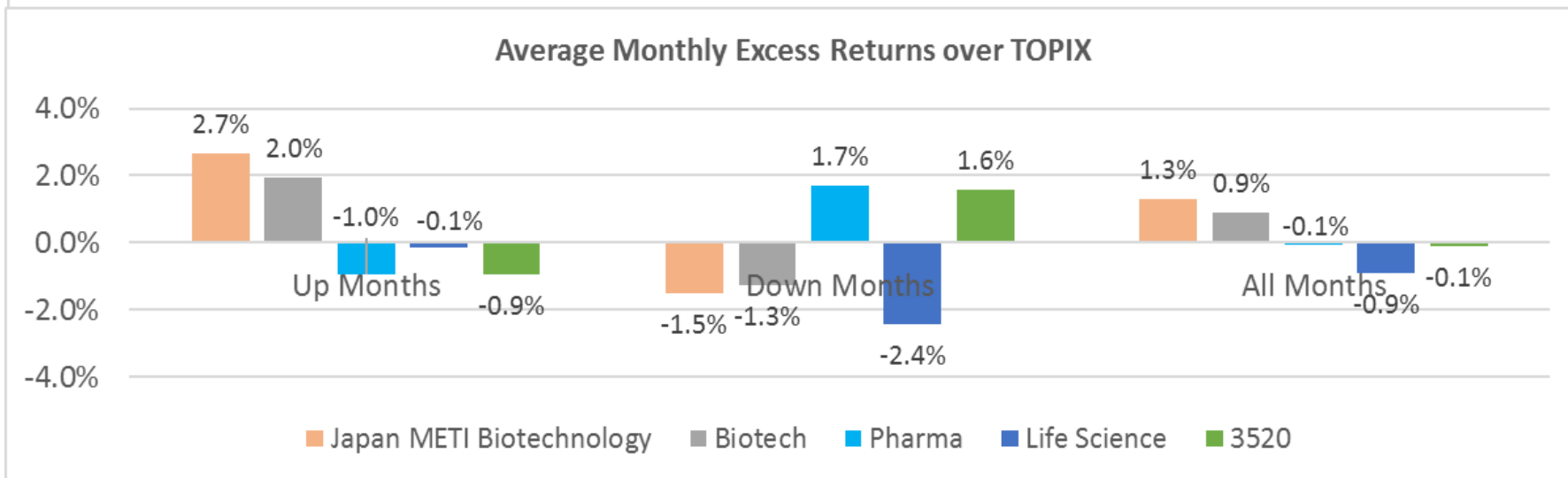
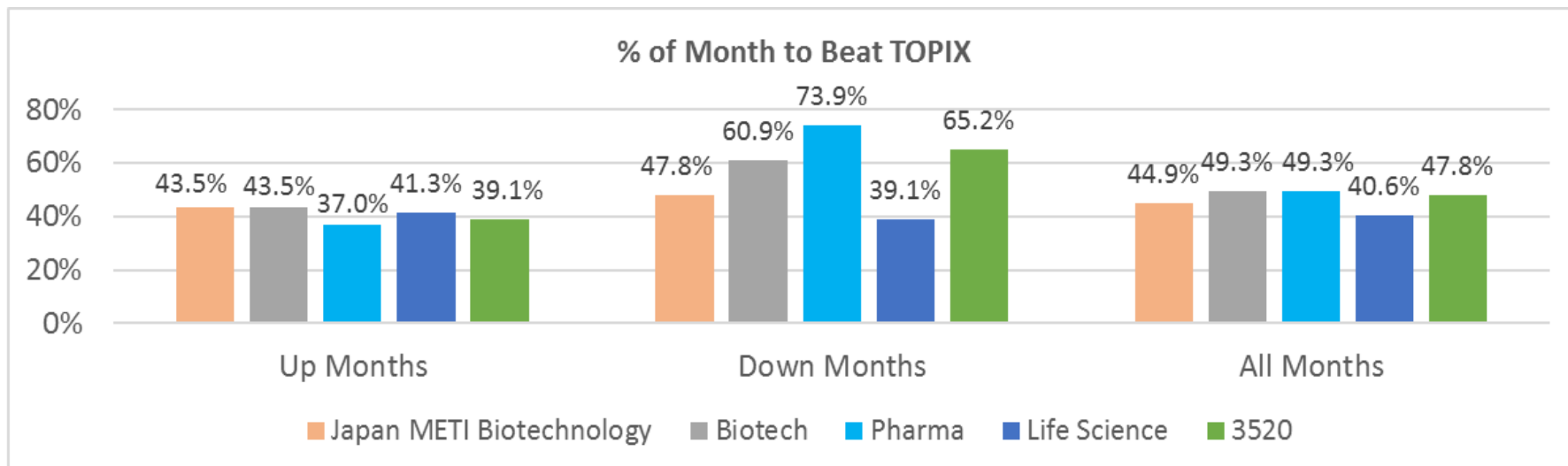
Annual Return (TR, JPY)



## S&P Dow Jones Indices

Source: S&P Dow Jones Indices. Data as of June.29, 2018 based on total returns in JPY. 3520: S&P Japan BMI Pharmaceuticals, Biotechnology & Life Sciences Index. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

# Japan METI Biotechnology: Up & Down Market Performance



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Source: S&P Dow Jones Indices. Data based on monthly total returns in JPY from September 28, 2012 to June 29, 2018. 3520: S&P Japan BMI Pharmaceuticals, Biotechnology & Life Sciences Index. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

# Japan METI Biotechnology: Industry Breakdown

Japan METI Biotechnology Sub Industry	Japan METI Biotechnology	
	# Stocks	Weight
<b>Biotechnology</b>	<b>22</b>	<b>47.8%</b>
<b>Pharmaceuticals</b>	<b>20</b>	<b>40.1%</b>
TSE 1st & 2nd Sections	15	30.0%
TSE Mother & JASDAQ	5	10.1%
<b>Life Sciences Tools &amp; Services</b>	<b>9</b>	<b>12.1%</b>
<b>Total</b>	<b>51</b>	<b>100.0%</b>

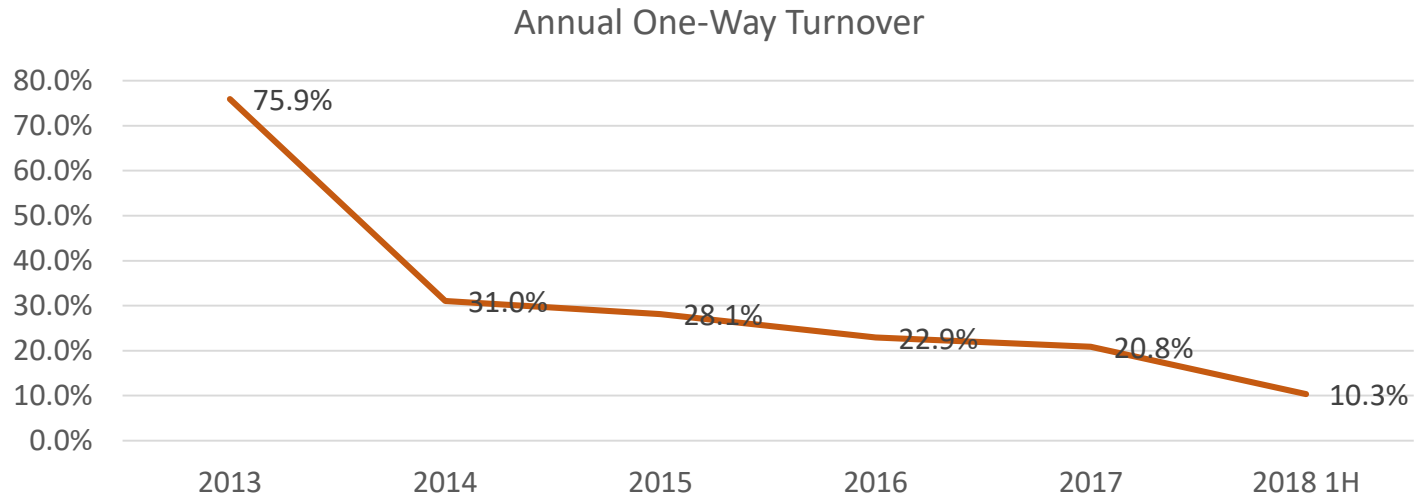
## S&P Dow Jones Indices

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Source: S&P Dow Jones Indices. Data based on rebalance in March 2018. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance.



# Japan METI Biotechnology Index: Turnover & Tradability



Basket Liquidity	
At 6M MDVT	
Japan METI Biotechnology	
# Days Needed to Turnover 10 Billion JPY	
Min	0.0
Max	20.9
Median	0.5
Average	1.5
Maximum Daily Fund Turnover (JPY, Million)	477.8

## S&P Dow Jones Indices

A Division of S&P Global. Turnover data based on rebalances from March 2013 to March 2018. Liquidity data based on 6M MDVT as of Feb. 28, 2018 and the new basket to be effective on March 31, 2018. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosures at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

# Japan METI Biotechnology: 1-Yr Annualized Volatility

Annualized Volatility (7/1/2017-6/29/2018)			
Individual Stocks		Indices/Portfolios	
Min	18.8%	Biotechnology	29.5%
Max	97.3%	Pharmaceuticals	14.7%
Median	41.9%	Life Sciences Tools & Services	24.0%
Average	43.9%	3520 Industry Group	14.7%
Wt. Avg.	42.7%	Japan METI Biotechnology	23.2%

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# Thank you

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