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Rise of the Developed World

Updating the NWM COVID Growth Differentiation Framework

In our *Year Ahead*, we laid out our COVID Differentiation Framework, which scores countries based on virus management, policy response, and economic scarring. A clear conclusion in November was Asian outperformance looked likely to be sustained strongly, even if the growth "delta" was likely to shift West in 2021, as a viable vaccine-sparked a consumer-led recovery.

Now, with the pandemic entering its next (and hopefully final) phase of vaccinations and sustained reopenings, we update our framework to include two new elements: vaccination distribution and "impetus to growth", the latter gauging those economies best positioned structurally for a post-COVID normalization of both domestic and global activity (i.e. those where the service sector and exports account for a large percent of GDP).

Evaluating growth prospects through this expanded lens leads us to expect the following:

- A general outperformance of the G10 versus emerging economies, supported by strong policy response and a strong growth impetus.
- A much stronger relative performance from both the US and UK, with their respective scores improving greatly since November (their score momentum is high), though the US may be held back by relatively greater scarring and a poor track record when it comes to COVID case management. Nonetheless, the US is showing strong upward momentum in early 2021. The UK performs strongly both on level and on momentum since November.
- Within the major European economies, outperformance by both Italy and Germany looks positive from a level perspective, but they have quite poor momentum when looked at on the basis of changes since our November analysis. Asia is now more mixed, showing greater dispersion within the region.
- In EM, overall EM is seen as lagging, with Israel a clear exception. In particular, Eastern Europe and LATAM generally underperforms in our new framework, which underscore our current selective take for the EM asset class as summarized here.

Strategists

John Briggs
Global Head of Strategy
+1 203 897 4689
john.briggs@natwestmarkets.com

Michelle Girard
Co-Head of Global Economics and
Head of Strategic Coordination and Business Operations
+1 203 897 2818
michelle.girard@natwestmarkets.com

Special thanks to **Shubha Samalia** for her invaluable contributions to this analysis.

www.agilemarkets.com
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The New Growth Differentiation Framework

Last year, we identified COVID as a growth differentiator and argued those who managed the virus well and reacted with effective policies (Asia) would outperform those who didn't (US, UK) in the near-term and would likely see long-term growth benefits as well.

The widening availability and distribution of vaccines has been a game changer. In this next phase, growth prospects are now more dependent on the pace of vaccine distribution, where US and UK have led among DM. In addition, those economies that will benefit most from normalization in activity in services and trade may be relative "winners" over the near term, even as they may lag individually on vaccine distribution. These are the two factors that we have included in our new growth differentiation framework, vaccinations and "growth impetus" arising from vaccinations, which lead us to new conclusions for this next phase of COVID growth differentiation. Note, for a full analysis of our past and present methodologies, as well as a detailed breakdown of each pillar and sub-component, see Table 1 and Appendix A at the end of this document.

We look at our new results in two different ways: on outright levels and rate of change since our last evaluation. On an outright basis, we see that Asia still leads the way with respect to our growth framework: Singapore, Japan, New Zealand, Taiwan, China, and Thailand are all notable standouts. Israel and Germany also score well, as does the UK and Italy, but the US is middle of the pack, and barely positive.

Chart 1: Growth Differentiation Score

Source: OurWorldInData.org, Bloomberg, Haver, IMF, NatWest Markets

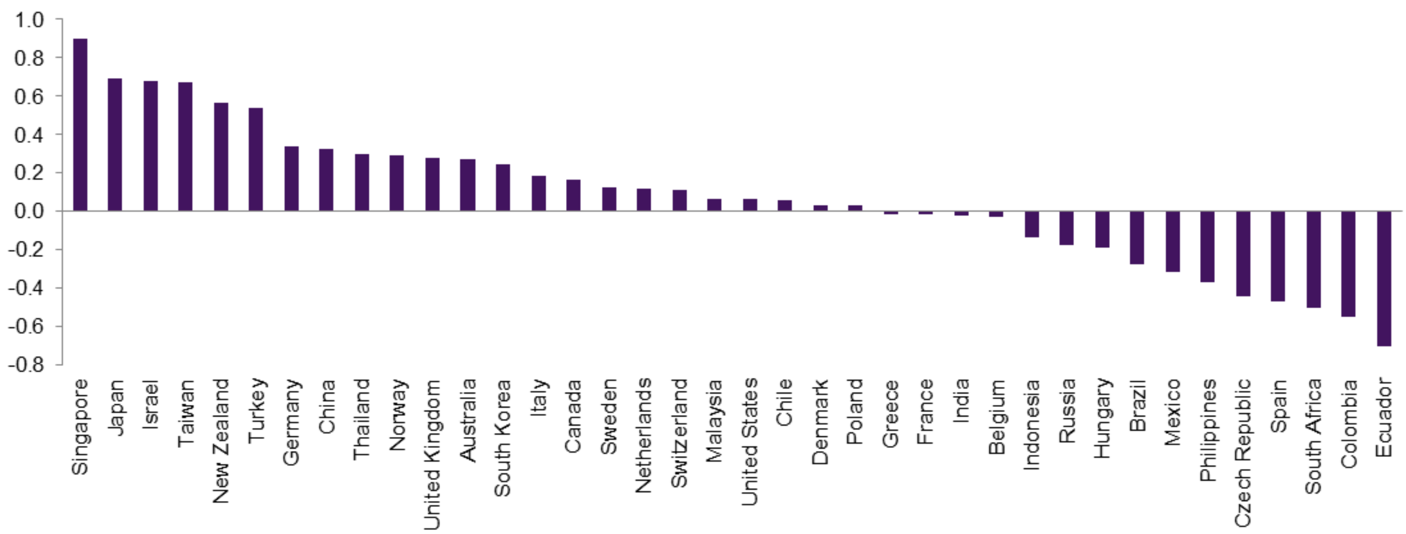
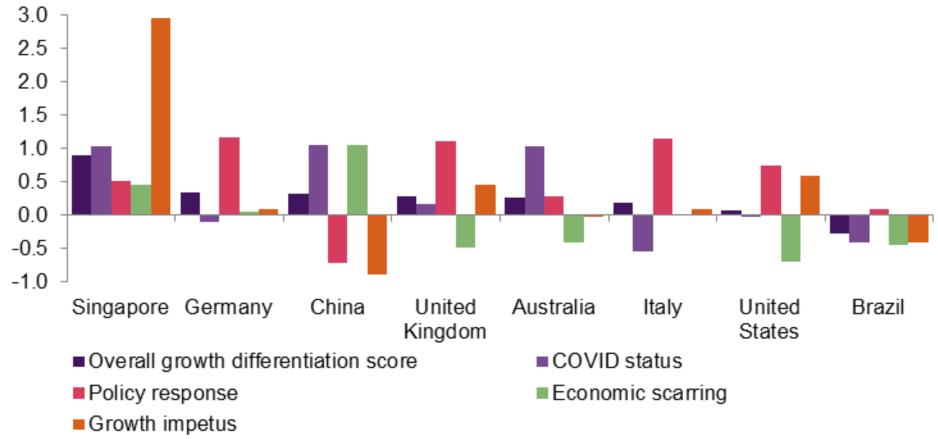


Chart 2 below presents a visual breakdown of the inputs into our total growth differentiation score on Chart 1. The score for the US is dragged lower mainly by poor performance regarding economic scarring and COVID performance pre-vaccinations, which leaves its "COVID-status" score virtually flat (though, as we show below, this is a major improvement with the addition of vaccinations). The important takeaway here is that while the US is a service sector/consumer-dominated economy that has received massive policy support, previous damage lingers and may inhibit the recovery more than markets are currently anticipating.

For the UK on the other hand, its vaccination score and growth impetus are now good enough to neutralise the negative impact of poor virus management, turning its overall COVID status score positive, and its overall growth differentiation score nearly on par with some of the standouts from Asia such as South Korea.

Chart 2: Overall Growth Differentiation Score and Contribution by Pillar for Select Countries

Source: OurWorldInData.org, Bloomberg, Haver, IMF, NatWest Markets



** Covid status, policy response, economic scarring and growth impetus contribute to overall*

On the negative side, LatAm (especially countries such as Colombia), South Africa, and Eastern Europe remain challenged, even as other EM countries such as Taiwan and Thailand fare well. France and Spain are the most notable poor performers in Europe, especially in comparison to Italy and Germany.

The momentum angle

The second way we use the new framework is consider momentum, i.e. how much the growth prospects of certain countries have improved or deteriorated since last November, taking into account the new factors. Their score *momentum* is arguably as important, if not more so, than a static snapshot of their current status. Chart 3 displays who has improved the most since November, and who has performed poorly.

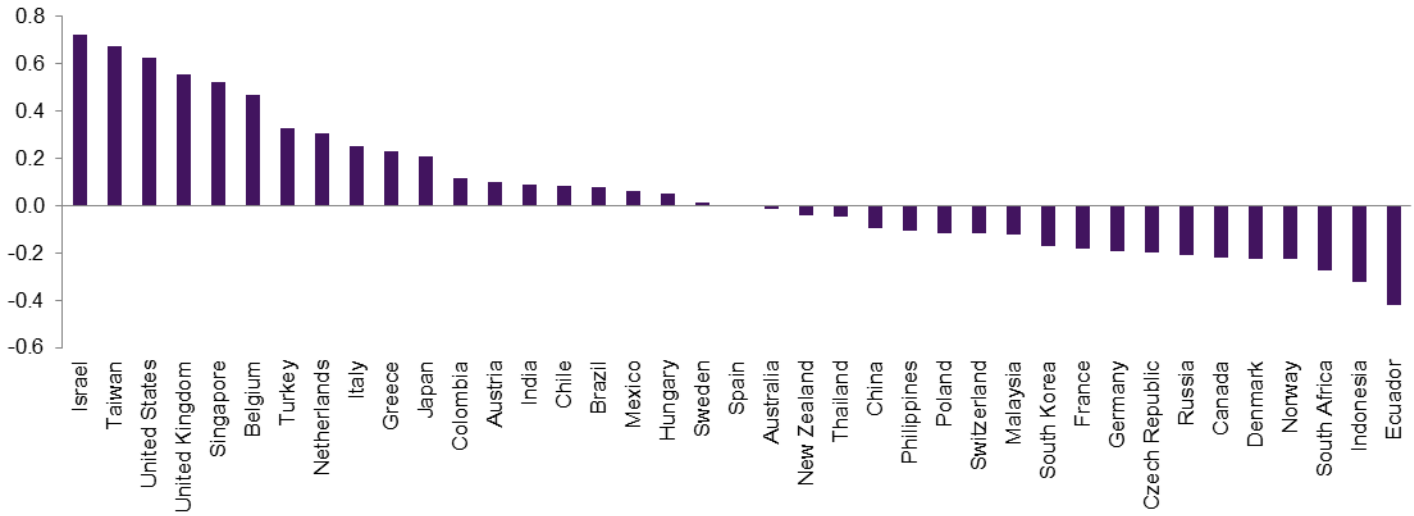
This is where the US stands out, having improved more since November than any other nation except Israel, and even more so than the UK. The US may have a fair way to go to conquer past economic scarring, but it is covering lost ground quickly. On this basis, the current theme of US and UK exceptionalism is reinforced.

Through the lens on momentum, for some we see repeated outperformance as when we look at levels, with countries such as Israel, Taiwan, and Singapore again near the top (we analyze EM more deeply in our EM vaccination rankings here). Japan scores well, perhaps reinforcing the recent strong performance of the Nikkei. In addition, several EM nations do not look as bad as the static snapshot, such as Hungary.

On the negative side, the most notable trend is a loss of progress in Europe as a whole, outside of Italy, which is quite a positive story. Canada also shows a lack of momentum. In both cases there have been public shortfalls in vaccine distribution. Without better performance on vaccines, the Continent may continue to suffer, especially on a relative growth basis. It may take both vaccination rates to increase, and Europe’s fiscal stimulus to kick in later in the year for investors to consider any shift in growth momentum to Europe as a worthwhile theme.

Chart 3: Growth Differentiation Score – Change from November 2020

Source: IMF, Haver, Bloomberg, NatWest Markets, OurWorldInData.org



Impact on Views

Our analysis reinforces several of our current views:

- US and UK Exceptionalism as a theme in reinforced, especially the UK. **Hold 5s30s steepeners in the US, short UK 10yr rates.**
- In addition, momentum in progress favors US and UK over Europe. **Hold long GBP vs. EUR and CHF.**
- Italy shows relatively favorable scores versus France and Spain, and better momentum vs. Germany. **Hold tighter Italian 10yr spreads against France, Germany, and Spain.**
- A pickup in vaccination rates as a game changer for western, service-linked economies is a relative boon for oil among industrial commodities, given its link to services (i.e. travel) among commodities. We hold **short EUR/NOK** as well as **long COP and RUB against a basket of EUR and USD**
- Asia is more mixed, with Singapore, Taiwan, China, South Korea, Thailand in the top 15, while Philippines and Indonesia are negative. **We hold long TWD**, having switched out of long KRW in January (interestingly, by our metric, on a momentum basis, Taiwan continues to improve while Korea has lost ground since November.
- Elsewhere in EM, Israel continues to shine, and we are **long ILS through options** as we think that FX is the most direct asset class to express the COVID outperformance. On the other hand, Mexico remains a consistent underperformer, which coupled with room for further cuts, makes the peso a good short vs. idiosyncratic stories. On the EM rate space we have singled out Chile and Poland as good front-end payers (here) with Israel's vaccine outperformance also adding to that list.

Special thanks to Shubha Samalia for her invaluable contributions to this analysis.

Table 1: Detailed COVID Differentiation Scorecard

Source: NatWest Markets, Haver, Bloomberg, IMF, OurWorldInData.org, World Bank

		COVID Status Score				Policy Response Score				Economic Scarring Score				Impetus to growth			
		situation over entire period	current situation score	vaccin-ation score	***Overall***	Fiscal	Monetary	FX	***Overall***	Debt	UER	Current GDP vs pre pandemic	***Overall***	*Services, as % of GDP*	*Exports, as % of GDP*	***Overall***	***Growth diff Score***
G10	Belgium	-1.67	-0.12	-0.13	***-0.51***	0.31	0.16	-0.67	***0.17***	-0.48	0.66	-0.52	***-0.12***	1.03	1.19	***1.11***	***-0.03***
	Canada	0.32	0.43	-0.26	***0.06***	0.80	3.81	-0.23	***1.60***	-1.10	-1.89	-0.52	***-1.17***	0.81	-0.43	***0.19***	***0.17***
	France	-0.85	-0.86	-0.07	***-0.46***	0.65	0.41	-0.67	***0.45***	-0.80	0.57	-0.27	***-0.17***	1.13	-0.38	***0.37***	***-0.02***
	Germany	-0.25	-0.07	-0.07	***-0.11***	1.98	0.16	-0.67	***1.17***	0.25	0.08	-0.17	***0.05***	0.06	0.12	***0.09***	***0.34***
	Italy	-1.30	-0.61	-0.13	***-0.54***	1.92	0.17	-0.67	***1.14***	-1.16	1.64	-0.46	***0.00***	0.58	-0.40	***0.09***	***0.19***
	Japan	1.09	0.79		***0.94***	2.67	-0.36	0.22	***1.51***	-1.31	0.57	0.23	***-0.17***	1.01	-0.87	***0.07***	***0.69***
	Netherlands	-0.17	-0.40	-0.12	***-0.20***	-0.33		-0.67	***-0.44***	0.97	0.82	0.19	***0.66***	1.07	1.16	***1.11***	***0.12***
	Sweden	-0.62	-0.62	-0.08	***-0.35***	-0.59	3.71	-1.43	***0.62***	1.03	-0.74	-0.09	***0.07***	0.42	0.00	***0.21***	***0.12***
	Switzerland	-0.74	0.29	0.08	***-0.07***	-0.38	-0.24	-0.26	***-0.33***	1.20	0.22	-0.13	***0.43***	1.23	0.80	***1.02***	***0.11***
	United Kingdom	-1.66	-0.56	1.43	***0.16***	1.89	0.08	-0.52	***1.11***	-1.61	0.16	-0.01	***-0.49***	1.28	-0.36	***0.46***	***0.28***
	United States	-1.14	-0.82	0.93	***-0.03***	0.98	0.03	1.39	***0.74***	-1.20	-1.07	0.18	***-0.70***	2.08	-0.89	***0.59***	***0.06***
Oceania	Australia	1.15	0.90		***1.02***	0.86	-0.20	-1.69	***0.29***	-0.95	0.08	-0.34	***-0.40***	0.54	-0.58	***-0.02***	***0.27***
	New Zealand	1.19	0.89		***1.04***	1.34		-1.24	***0.56***	-1.02	0.49	1.35	***0.27***	0.42	-0.39	***0.01***	***0.56***
Other European	Austria	-0.49	-0.17	-0.32	***-0.32***	-0.18	0.54	-0.67	***-0.01***	0.12	-0.08	-0.25	***-0.07***	0.08	0.41	***0.24***	***-0.10***
	Denmark	0.53	0.53	0.12	***0.32***	-1.01	-0.44	-0.73	***-0.81***	1.14	0.49	-0.15	***0.49***	0.37	0.28	***0.32***	***0.03***
	Greece	0.13	0.11	0.06	***0.09***	0.35	0.05	-0.67	***0.16***	-0.68	1.39	-1.84	***-0.38***	0.83	-0.33	***0.25***	***-0.01***
	Norway	1.02	0.68		***0.85***	-0.65	-0.78	-0.76	***-0.70***	2.99	0.24	-0.29	***0.98***	-0.64	-0.38	***-0.51***	***0.29***
	Spain	-0.99	-0.77	-0.05	***-0.47***	0.05	0.34	-0.67	***0.06***	-1.45	-0.90	-1.31	***-1.22***	0.76	-0.35	***0.21***	***-0.47***
Asia	China	1.19	0.90		***1.04***	-0.80	-0.61	-0.49	***-0.71***	0.13	1.15	1.88	***1.05***	-1.18	-0.60	***-0.89***	***0.33***
	India	1.04	0.85		***0.95***	-0.76	-0.48	0.67	***-0.54***	-0.38	1.18	-0.95	***-0.05***	-1.82	-0.74	***-1.28***	***-0.02***
	Indonesia	0.98	0.67		***0.83***	-1.12	-0.51	0.78	***-0.74***	0.45	-0.31	-0.02	***0.04***	-2.55	-0.80	***-1.68***	***-0.13***
	Malaysia	1.14	0.59		***0.86***	-0.69	-0.85	0.28	***-0.64***	0.85	-0.17	-0.48	***0.07***	-1.14	0.71	***-0.22***	***0.06***
	Philippines	1.02	0.73		***0.88***	-1.13	-0.48	-0.03	***-0.83***	-0.11	-2.55	-0.85	***-1.17***	-0.17	-0.50	***-0.34***	***-0.37***
	Singapore	1.19	0.89		***1.04***	1.08	-0.46	0.05	***0.52***	1.76	0.41	-0.82	***0.45***	1.16	4.75	***2.95***	***0.90***
	South Korea	1.14	0.85		***1.00***	-0.35	-0.37	-0.34	***-0.35***	0.63	-0.25	0.48	***0.29***	-0.73	0.10	***-0.32***	***0.25***
	Taiwan	1.19	0.90		***1.04***		-0.44	-0.49	***-0.46***		1.11	1.78	***1.45***				***0.68***
	Thailand	1.19	0.89		***1.04***	-0.08	-0.43	0.14	***-0.16***	-0.07	0.73	-0.54	***0.04***	-0.51	0.94	***0.21***	***0.30***
LATAM	Argentina																
	Brazil	-0.47	-0.67	-0.25	***-0.41***	0.05	-0.77	2.88	***0.09***	-0.50	-1.31	0.48	***-0.44***	0.15	-0.98	***-0.42***	***-0.27***
	Chile	-0.22	-0.24	1.10	***0.44***	-0.26	1.41	-0.91	***0.18***	0.62	-1.62	0.24	***-0.25***	-0.50	-0.45	***-0.48***	***0.06***
	Colombia	-0.57	0.13	-0.54	***-0.38***	-0.57	-0.28	0.98	***-0.33***	-0.45	-2.05	-0.08	***-0.86***	-0.66	-0.91	***-0.78***	***-0.55***
	Ecuador	0.04	0.32	-0.55	***-0.19***	-1.56	-0.10	1.39	***-0.83***	-0.12	-1.15	-1.79	***-1.02***	-1.47	-0.40	***-0.93***	***-0.70***
	Mexico	-0.96	-0.32	-0.38	***-0.51***	-1.37	-0.49	1.42	***-0.83***	0.42	0.27	0.39	***0.36***	-0.33	-0.14	***-0.24***	***-0.32***
CEEMEA	Czech Republic	-2.12	-4.33	-0.15	***-1.69***	0.31	-0.70	-0.25	***-0.05***	0.46	0.24	0.01	***0.24***	-0.76	0.95	***0.09***	***-0.44***
	Hungary	-1.48	-1.43	0.06	***-0.70***	-0.68	0.10	0.12	***-0.36***	0.74	0.41	0.01	***0.39***	-0.82	1.15	***0.16***	***-0.19***
	Israel	0.19	-0.73	5.39	***2.56***	-0.37	-0.47	-0.13	***-0.38***	-0.74	0.41	0.11	***-0.07***	1.07	-0.18	***0.44***	***0.68***
	Poland	-0.82	-0.66	0.05	***-0.35***	-0.09	-0.11	-0.09	***-0.09***	0.08	0.82	0.96	***0.62***	-0.65	0.25	***-0.20***	***0.03***
	Russia	0.26	0.17	-0.34	***-0.06***	-1.04	-0.70	1.98	***-0.63***	1.37	0.00	-0.22	***0.39***	-1.16	-0.46	***-0.81***	***-0.18***
	South Africa	-0.12	0.40	-0.55	***-0.20***	-0.48	-0.44	0.32	***-0.39***	-1.29	-1.36	-0.24	***-0.96***	-0.15	-0.56	***-0.35***	***-0.50***
	Turkey	0.65	0.46	0.43	***0.49***	-0.77	-0.28	2.35	***-0.31***	0.21	1.31	4.04	***1.86***	-0.82	-0.71	***-0.76***	***0.54***

* The numbers are all Z-Scores

* Higher the score - better the COVID status, higher the policy response, lesser the economic scarring, more the growth impetus etc.

Appendix A

COVID Differentiation Framework: Methodology

Our framework looks at COVID-19 differentiation through four different lenses which we call the verticals or pillars on which the framework is built. These come together to give the final growth differentiation score for the countries we analyze. Each pillar in turn has its own input metrics that contribute to its individual score. The framework is designed to look at the countries relative to each other; the scores everywhere thus are z-scores. Also to maintain consistency, the scoring is done in a way that higher score for any of the pillar, or for any input metrics to the pillar, is indicative of good performance/better management/less scarring etc.

It’s also worth highlighting that not all pillars contribute equally to the final growth differentiation score. And the same goes for the input metrics to each of them. We realize that some factors could be more significant than others and thus account for that nuance by assigning different weights to different metrics where deemed necessary. Thus, there is inherently some subjectivity here on our part.

The below snapshot captures the details of the four verticals, the input metrics to each of them, and the weights with which the metrics and the vertical’s scores finally combine to give the growth differentiation score.

Table 2: COVID Differentiation Framework : Four pillars and their constituent metrics

Source: NWM

<table>
<tr><th>4-Pillars</th><th>Inputs metrics to pillars</th><th>Input metrics - 1 level down</th><th colspan="2">Comment on weights</th><th></th></tr>
<tr><td rowspan="3">COVID status score</td><td>COVID-19 situation score over entire time period</td><td>1. Total deaths per million
2. Avg daily deaths per million since Oct 1st</td><td>Total deaths account for twice the weight as avg daily deaths</td><td rowspan="3">If current and entire period average z-score>0.75 ; vaccination not taken into account; covid status score then average of both those scores; else vaccination contributes 50% to status score while current and overall situation 25% each</td><td rowspan="6">For overall growth differentiation score the first three pillars contribute 30% each, while impetus to growth score contributes 10%</td></tr>
<tr><td>Current COVID-19 situation score</td><td>1. Current daily cases per million population
2. Current daily deaths per million population</td><td>Both series go with equal weight</td></tr>
<tr><td>Vaccination score</td><td>1. Percentage of population that has been administered atleast a single dose
2. Rolling 7d sum of new vaccine doses administered (adj for population)</td><td>Percentage of popl'n administered goes with twice the weight compared to new vaccine doses administered</td></tr>
<tr><td>Policy response score</td><td colspan="2">1. Percentage age inc in monetary base since Feb 2020
2. FX dep since Feb '2020
3. Fiscal measure in response to COVID-19 as percentage of GDP</td><td colspan="2">Fiscal, Monetary, FX contribute to policy response score in the ratio 6:3:1. Within Fiscal, above-the-line spending gets twice the weight as compared to liquidity support measures</td></tr>
<tr><td>Economic scarring score</td><td colspan="2">1. Change in net govt debt as % of GDP (2021 and end 2019)
2. Current GDP vs end 2019
3. Unemployment rate (latest vs H2 2019)"</td><td colspan="2">All three inputs contribute equally to scarring score</td></tr>
<tr><td>Impetus to growth score</td><td colspan="2">1. Services, as % of GDP
2. Exports, as % of GDP"</td><td colspan="2">Both with same weight</td></tr>
</table>

Reinstating two important points from the snapshot

- The four verticals – COVID status score, Policy response score, Economic scarring score and Growth impetus score – contribute to the overall growth differentiation score in the ratio 3:3:3:1
- Within the COVID status score, vaccinations do not come into picture for the countries that have been "world-beaters" on COVID management. In other words, if the country has done extremely well on the first two metrics- COVID management over full crisis and current COVID situation score – vaccination score is not accounted for. However if otherwise, vaccinations make a huge difference and come in with a 50% weight

Methodology in last Nov

The below snapshot captures the methodology we used for the framework in last Nov, when we put out our 2021 year ahead outlook

Table 3: COVID Differentiation Framework: Previous version

Source: NWM

4-Pillars	Input metrics to pillars	Comment on weights	
COVID-19 situation score over entire time period	1. Total deaths per million 2. Avg daily deaths per million in last three months	Total deaths with twice the weight as avg daily deaths	For overall growth differentiation score all four pillars contribute 25% each
Current COVID-19 situation score	1. Current daily cases per million population 2. Case trend score (metric that captures rate at which case curve curve coming down)	Both inputs with same weight	
Policy response score	1. % age inc in monetary base since Feb 2020 2. FX dep since Feb '2020 3. Fiscal measure in response to COVID-19 as % of GDP	Fiscal, Monetary, FX contributing in ratio 6:3:1. Within fiscal above-the-line spending gets twice weight as compared to liquidity support measures	
Economic scarring score	1. Net govt debt in 2021 as % of GDP 2. Current GDP vs end 2019 3. Unemployment rate (latest vs H2 2019)	All three inputs with same weight	

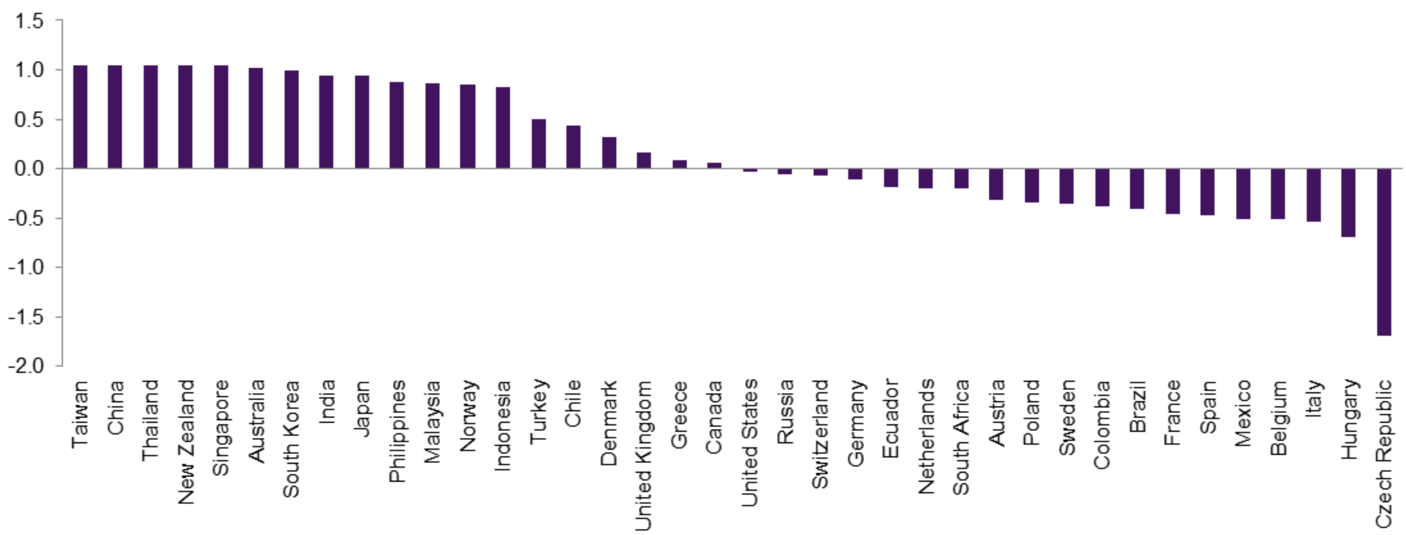
The introduction of vaccination administration and growth impetus are two primary factors via which our new methodology differs from the old, but another change is reduced weightage for COVID status. COVID status in old methodology accounted for two pillars out of four, contributing 50% to the final differentiation score. In the new evolved framework, we combined those two pillars into one while simultaneously adding vaccinations. The COVID status pillar in new framework contributes 30% to the overall growth differentiation score.

The Specific Impact of Vaccinations on the COVID Management Pillar

Chart 4 shows the updated COVID Management score, including vaccinations. Note, we have excluded Israel from this graphic, for their speed of vaccinations distorts the scale: Indeed, Taiwan's otherwise leading score of +1.04 is dwarfed by Israel's +2.56. Interestingly, even with the large weight (50%) assigned to vaccinations within the COVID Management measure, the performance of the US and UK (world leaders in vaccination distribution) in terms of <u>overall</u> handling of the virus is still middle of the pack. That said, the performance of the European periphery and Eastern Europe looks far worse, as does LatAm.

Chart 4: Updated COVID Management Score, ex-Israel

Source:OurWorldInData.org, Natwest Markets, Bloomberg



The Specific Impact of the Addition of an "Impetus for Growth"

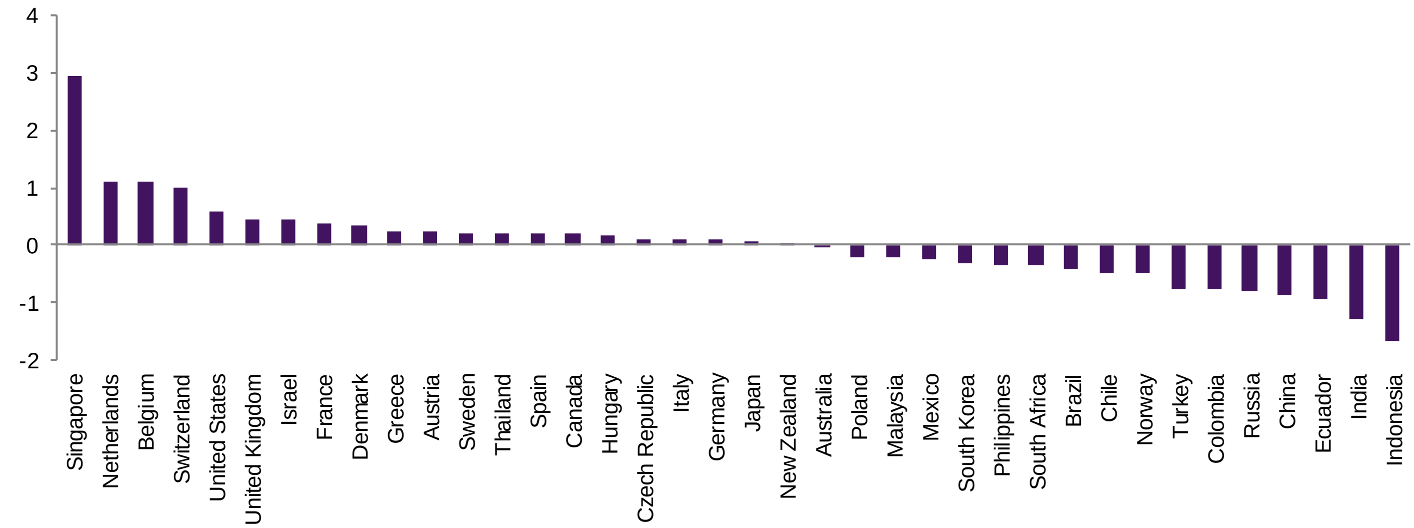
The second new factor in our analysis, in fact a new pillar on its own, is "impetus for growth" is more nuanced. While economies have partially recovered from the COVID hit, activity generally has not returned to pre-virus levels as consumer spending on services remains hampered. As more of the population is vaccinated and consumer outlays on services normalizes, those countries with a great share of service sector activity should outperform.

In addition, as the global economy reopens, economies with the ability to export to consumers all around the world should outperform. Thus, we now include an "impetus for growth" metric in our framework, which is a combination of what percent of each economy tied to services but also to exports. Economies with a higher "impetus for growth" score stand to benefit most from sustained reopening and a full post-COVID normalization in economic activity.

Chart 5 shows how many G10 economies rank favorably on this front, in fact the US and UK stand to benefit most within the G10 from a sustained reopening. However, several other economies also stand to benefit, notably Singapore and Israel (again strong performers), several European countries, and even Eastern Europe to an extent. Performing poorly on this metric are parts of LatAm (again), Russia given its reliance on crude exports, as well as several Asian nations, including China, showing how the Asia story for this next leg of the pandemic has become much more nuanced.

Chart 5: Impetus to Growth Status Score

Source: Haver, NatWest Markets

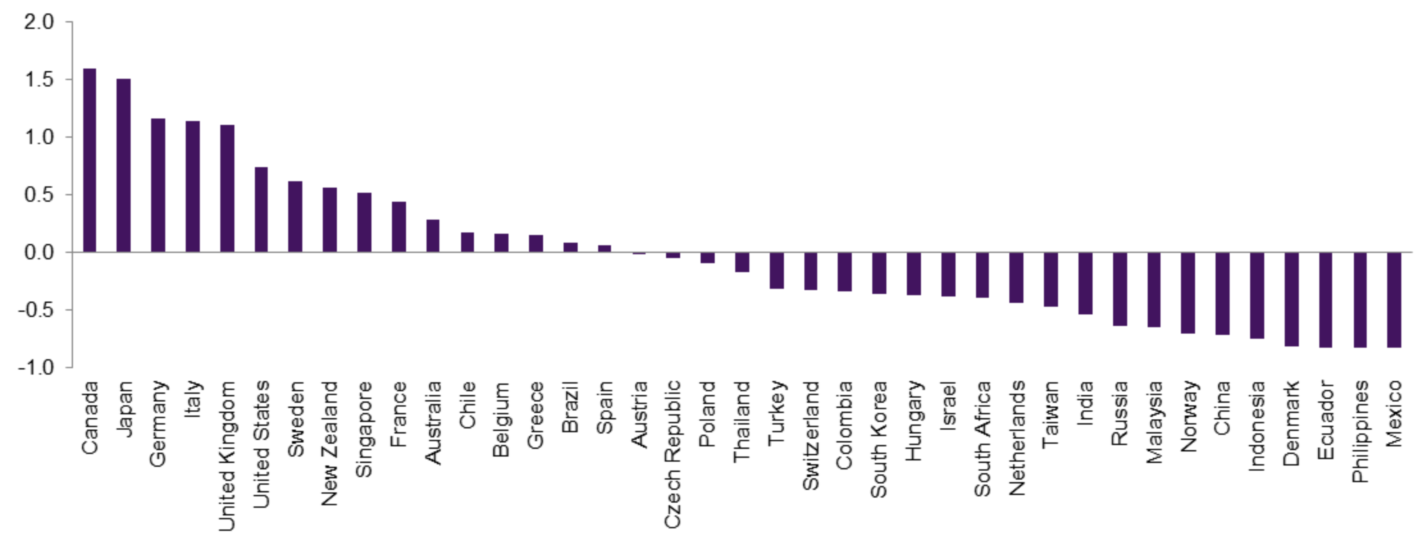


Updating the Other Factors

The methodologies remain unchanged for the other two factors in our framework, policy response score and economic scarring score, and each has been updated below to account for recent developments in Charts 6 and Chart 7. Notably, the US and UK have moved higher in their policy response score given additional support since November (and the US would move higher still if Biden's most recent stimulus plan is enacted). Also improving are Greece, Belgium, Japan, and Colombia. Notable negative changes are for Denmark and Taiwan.

Chart 6: Policy Response Score

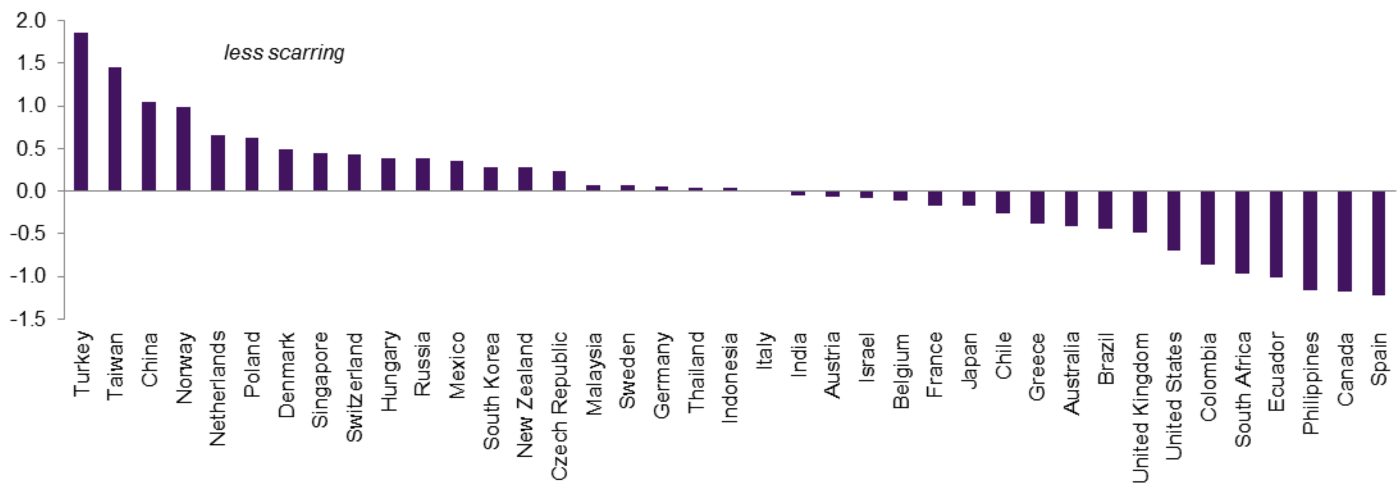
Source: IMF, Bloomberg, Haver, Natwest markets



For economic scarring, some of the largest changes have come in EM, from both the positive side (Turkey, Taiwan) and the negative side (Ecuador, Chile). Canada also fell notably within the G10.

Chart 7: Economic Scarring Score

Source: IMF, Haver, Natwest Markets, Bloomberg



* average z-score for change in GDP (latest nominal vs end-2019), change in unemp (latest vs end-2019) and change in gov debt (2021 vs 2019 end)