Operational Resilience

Adapting to the Changing Environment

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What is Operational Resilience?

Operational resilience is the **ability of an organization to continue to provide business services in the face of adverse operational events** by anticipating, preventing, recovering from, and adapting to such events.

The fundamental principle is **“bend, but don't break.”**

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Operational resilience is an organization's ability to detect, prevent, respond to, recover and learn from **operational disruptions** that may impact delivery of important business and economic functions or underlying business services.

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Potential Disruptors

Potential disruptors are those adverse scenarios that can affect impact the entire value chain, rather than single isolated events that are already addressed by your existing internal control systems.

- Major Internal System breakdowns (major production failures, loss of communication facilities, strikes, work stoppages due to unforeseen events).
- Failure of Core IT infrastructure
- Environmental events (climate change, volcanic eruptions, drought, typhoons)
- Significant Cyber events
- Catastrophic utility / provider outages
- Pandemic (plagues)
- Financial crisis or recession
- Wars, rebellions
- Catastrophic events (fire, floods, building collapse due to earthquakes, pollution due to volcanic eruptions, etc..)

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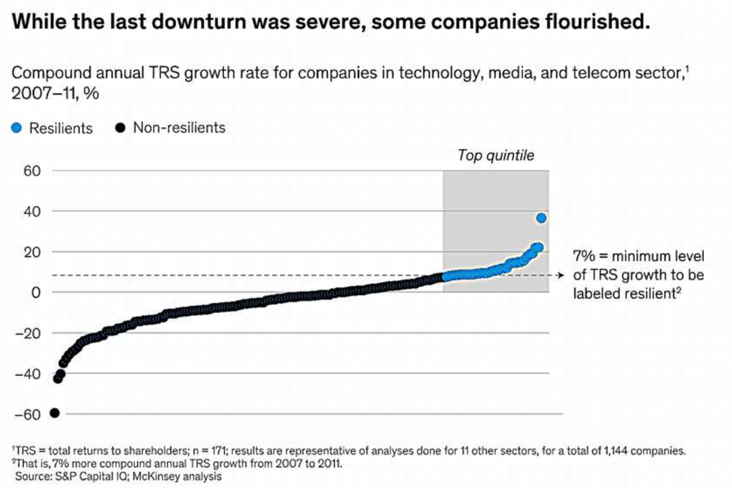
Learnings from the Past
(2007 Global Financial Crisis)



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Learnings from the Past
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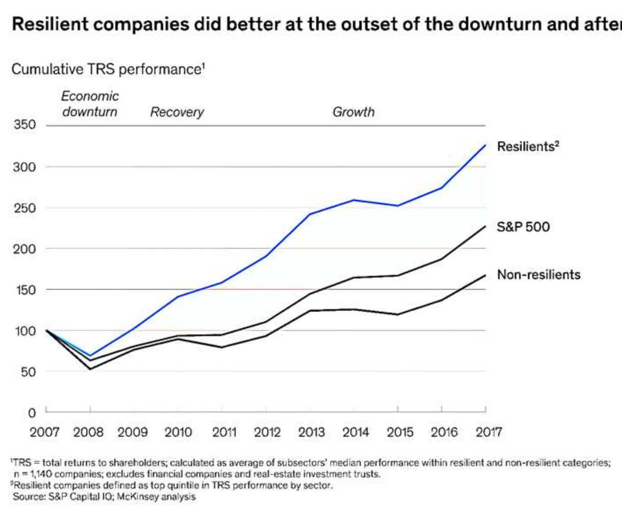

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Learnings from the Past
(2007 Global Financial Crisis)

Resilients did three (3) things to create earnings advantage:

- ***Resilients created flexibility—a safety buffer.*** They did this by cleaning up their balance sheets at the onset of the crisis, which helped them be more acquisitive afterward. In particular, resilients were deleveraging during 2007: they reduced their debt by more than $1 for every dollar of total capital on their balance sheet, while peers added more than $3 of debt.
- ***Resilients cut costs ahead of the curve.*** By the first quarter of 2008, the resilients already had cut operating costs by 1 percent compared with the year before, even as their peers' year-on-year costs were growing by a similar amount. The resilients maintained and expanded their cost lead as the recession moved toward its trough, improving their operating edge.
- ***Resilients in countercyclical sectors focused on growth, even if it meant incurring costs.*** Some industries may not be affected by a particular crisis, and therefore should not hold back their growth. For example, Oil and gas was in the middle of a commodity supercycle in the early part of the recession, with prices reaching as high as $120 per barrel. Meanwhile, demand for healthcare and pharmaceuticals proved relatively inelastic. For these growth sectors, the rule book was quite different. Their resilients actually overdelivered significantly on revenue, while taking on higher costs.

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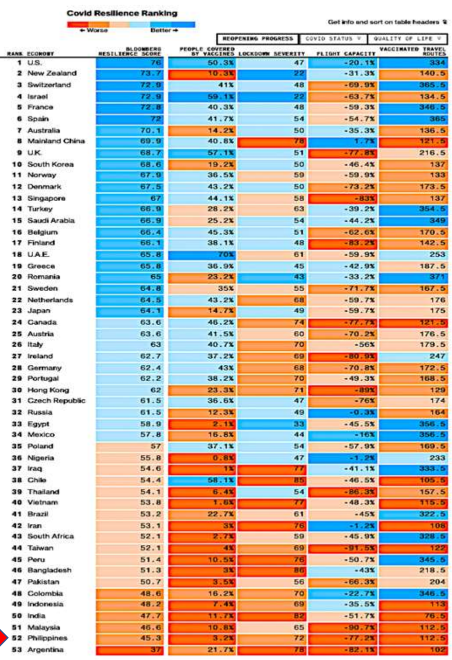
COVID Resiliency Ranking

(June 2021)


Covid Resilience Ranking

← Worse Better →

Get info and sort on table headers

REOPENING PROGRESS | COVID STATUS | QUALITY OF LIFE

RANK	ECONOMY	BLOOMBERG RESILIENCE SCORE	PEOPLE COVERED BY VACCINES	LOCKDOWN SEVERITY	FLIGHT CAPACITY	VACCINATED TRAVEL ROUTES
1	U.S.	76	50.3%	47	-20.1%	334
2	New Zealand	73.7	10.3%	22	-31.3%	140.5
3	Switzerland	72.9	41%	48	-69.9%	365.5
4	Israel	72.9	59.1%	22	-63.7%	134.5
5	France	72.8	40.3%	48	-59.3%	346.5
6	Spain	72	41.7%	54	-54.7%	365
7	Australia	70.1	14.2%	50	-35.3%	136.5
8	Mainland China	69.9	40.8%	78	1.7%	121.5
9	U.K.	68.7	57.1%	51	-77.8%	216.5
10	South Korea	68.6	19.2%	50	-46.4%	137
11	Norway	67.9	36.5%	59	-59.9%	133
12	Denmark	67.5	43.2%	50	-73.2%	173.5
13	Singapore	67	44.1%	58	-83%	137
14	Turkey	66.9	28.2%	63	-39.2%	354.5
15	Saudi Arabia	66.9	25.2%	54	-44.2%	349
16	Belgium	66.4	45.3%	51	-62.6%	170.5
17	Finland	66.1	38.1%	48	-83.2%	142.5
18	U.A.E.	65.8	70%	61	-59.9%	253
19	Greece	65.8	36.9%	45	-42.9%	187.5
20	Romania	65	23.2%	43	-33.2%	371
21	Sweden	64.8	35%	55	-71.7%	167.5
22	Netherlands	64.5	43.2%	68	-59.7%	176
23	Japan	64.1	14.7%	49	-59.7%	175
24	Canada	63.6	46.2%	74	-77.7%	121.5
25	Austria	63.6	41.5%	60	-70.2%	176.5
26	Italy	63	40.7%	70	-56%	179.5
27	Ireland	62.7	37.2%	69	-80.9%	247
28	Germany	62.4	43%	68	-70.8%	172.5
29	Portugal	62.2	38.2%	70	-49.3%	168.5
30	Hong Kong	62	23.3%	71	-89%	129
31	Czech Republic	61.5	36.6%	47	-76%	174
32	Russia	61.5	12.3%	49	-0.3%	164
33	Egypt	58.9	2.1%	33	-45.5%	356.5
34	Mexico	57.8	16.8%	44	-16%	356.5
35	Poland	57	37.1%	54	-57.9%	169.5
36	Nigeria	55.8	0.8%	47	-1.2%	233
37	Iraq	54.6	1%	77	-41.1%	333.5
38	Chile	54.4	58.1%	85	-46.5%	105.5
39	Thailand	54.1	6.4%	54	-86.3%	157.5
40	Vietnam	53.8	1.6%	77	-48.3%	115.5
41	Brazil	53.2	22.7%	61	-45%	322.5
42	Iran	53.1	3%	76	-1.2%	108
43	South Africa	52.1	2.7%	59	-45.9%	328.5
44	Taiwan	52.1	4%	69	-91.5%	122
45	Peru	51.4	10.5%	76	-50.7%	345.5
46	Bangladesh	51.3	3%	86	-43%	218.5
47	Pakistan	50.7	3.5%	56	-66.3%	204
48	Colombia	48.6	16.2%	70	-22.7%	346.5
49	Indonesia	48.2	7.4%	69	-35.5%	113
50	India	47.7	11.7%	82	-51.7%	76.5
51	Malaysia	46.6	10.8%	65	-90.7%	112.5
52	Philippines	45.3	3.2%	72	-77.2%	112.5
53	Argentina	37	21.7%	78	-82.1%	102

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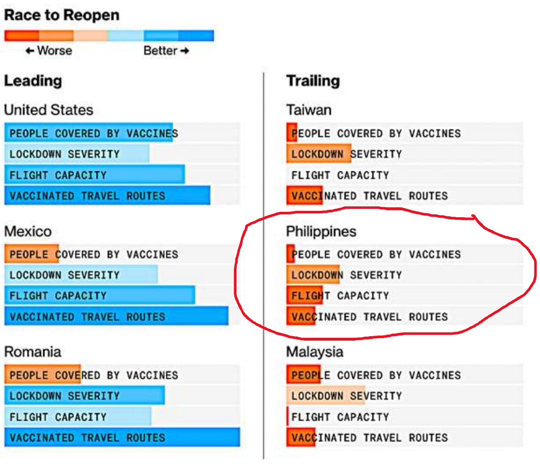
COVID Resiliency Ranking



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Operational Resilience Frameworks

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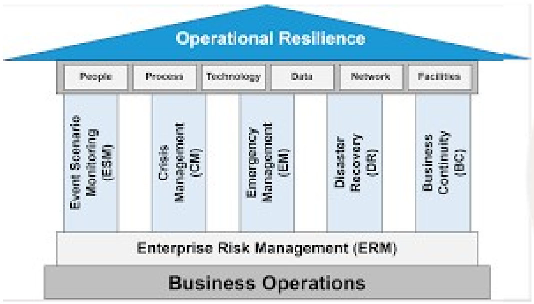
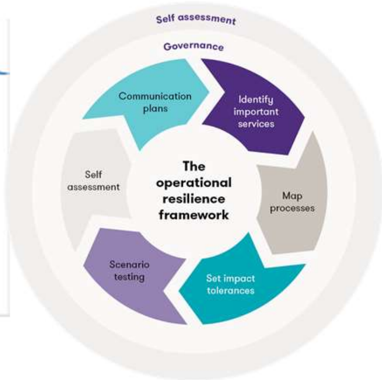
Operational Resilience Frameworks





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Operational Resilience Frameworks

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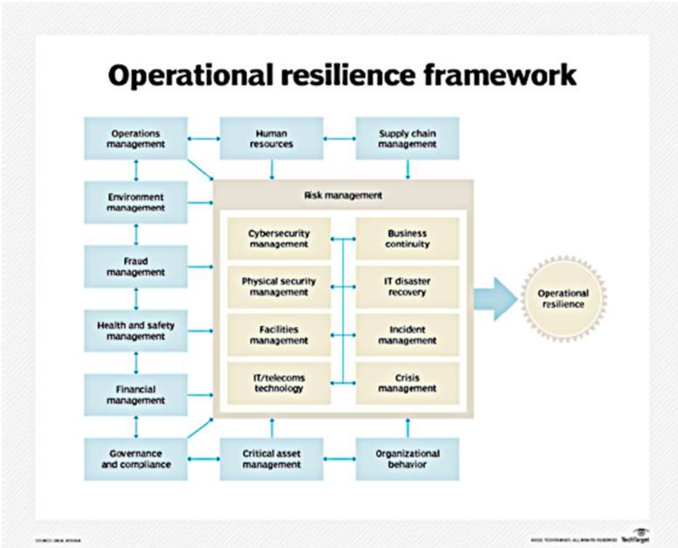
Operational Resilience Frameworks



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Operational Resilience Frameworks

Most of the Frameworks contain the following:

- **Generic activities** that can mitigate potential adverse scenarios (crisis management, incident management, disaster recovery, emergency management, business continuity, etc…)
- **Generic categories of resources** that may be affected by potential adverse scenarios (people, systems, processes, networks, facilities)
- **General steps or approach** for implementing operational resilience (e.g. self assessment, governance, impact tolerance, etc…)

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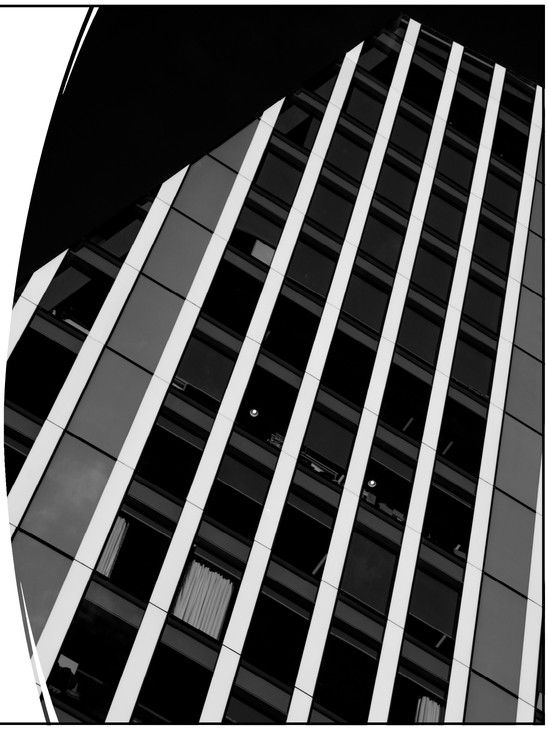
How can your Company achieve Operational Resilience?

- By Developing your own OR Framework
- By Enhancing your organization’s capabilities (i.e., professionalising all aspects of your business)



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Developing your own OR Framework

1. START WITH YOUR CLIENTS
   - KEY PRODUCTS/SERVICES
2. IDENTIFY DEPENDENCIES
   - KEY ACTORS
   - KEY PROCESSES
   - KEY SYSTEMS
3. IDENTIFY POTENTIAL ADVERSE SCENARIOS
4. IMPLEMENT RISK MANAGEMENT

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1. START WITH YOUR CLIENTS

- Resilience is all about maintaining the level of service even in stress situations.
- Ideally, an organization should be able to maintain its business-as-usual activities at any point in time.
- The first step in resilience is to identify the products and services that are really important to your key clients.
- Fundamental question: What do your clients really need from you?

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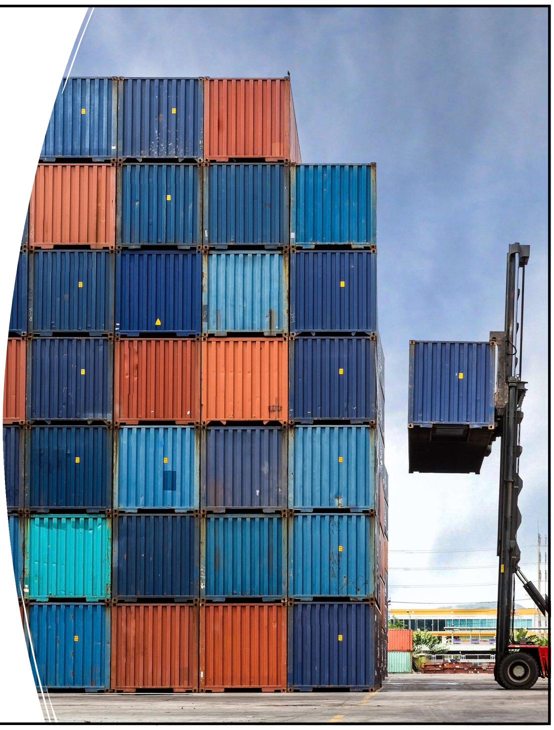
2. IDENTIFY DEPENDENCIES

- How to identify dependencies? Reverse-engineer your key products and services. Focus on the value chain that created them.
- The question is: what is key (in terms of systems, processes, people, staff) in order to maintain, unaffected, the offer of your product or services?
- Identify all types of dependencies: digital systems, logistics, regulatory requirements, etc…
- Understand who are the third parties (people and systems) which you cannot "live without".



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3. IDENTIFY POTENTIAL ADVERSE SCENARIOS

- Define potential threat scenarios. What can possibly go wrong with the identified value chain components.
- Identify those potential scenarios that will impact the entire value chain, rather than single isolated events that are already addressed by your existing internal control or risk management systems.
- Identify both internal and external threat scenarios. It is essential that you identify scenarios that can physically threaten the business as well as scenarios that threaten the viability of the business.

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4. IMPLEMENT RISK MANAGEMENT

- Conduct risk assessments: Determine which key actors, processes and systems will be greatly affected by the potential adverse scenarios.
- Identify the significant risks and determine their likelihood of happening and potential negative impacts.
- For those significant adverse risks, develop a risk management plan to stop, avoid, mitigate, transfer, share or control the risks.
- Identify key risk indicators and develop a monitoring plan to anticipate the risk occurrence.

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Developing your own OR Framework

Case Example:

ABC Company provides animal feeds to poultry chicken farms and backyard raisers. The animal feeds are specifically formulated for each farm and the ingredients are imported from abroad by ABC Company. If there are delays in delivering the feeds to the farms, the growth period of the chickens will be delayed as well, and the poultry farms could lose money. On the other hand, if there are delays in delivering feeds to backyard raisers, they can simply shift to local animal feeds. Backyard farmers consist of fifteen (15%) of gross sales.

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Developing your own OR Framework

Particulars		Adverse Scenarios	
KEY CLIENT			
KEY PRODUCT			
KEY PROCESSES			
KEY SYSTEMS			
KEY ACTORS			

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Developing your own OR Framework

Particulars		Adverse Scenarios	
KEY CLIENT	Farms		
KEY PRODUCT	Imported Animal Feeds		
KEY PROCESSES			
KEY SYSTEMS			
KEY ACTORS			

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Developing your own OR Framework

Particulars		Adverse Scenarios	
KEY CLIENT	Farms		
KEY PRODUCT	Imported Animal Feeds		
KEY PROCESSES	Importation		
	Delivery		
	Formulation		
KEY SYSTEMS	Ordering system		
	Inventory monitoring		
KEY ACTORS	Sales personnel		
	Procurement personnel		

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Developing your own OR Framework

Particulars		Adverse Scenarios	
KEY CLIENT	Farms	Pandemic (COVID)	IT Infra Breakdown
KEY PRODUCT	Imported Animal Feeds		
KEY PROCESSES	Importation		
	Delivery		
	Formulation		
KEY SYSTEMS	Ordering system		
	Inventory monitoring		
KEY ACTORS	Sales personnel		
	Procurement personnel		

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Developing your own OR Framework

Particulars		Adverse Scenarios	
KEY CLIENT	Farms	Pandemic (COVID)	IT Infra Breakdown
KEY PRODUCT	Imported Animal Feeds		
KEY PROCESSES	Importation	Delays due to Port shutdown	
	Delivery	Delays due to lockdown areas	
	Formulation	No major impact	
KEY SYSTEMS	Ordering system	No major impact	
	Inventory monitoring	Lack of personnel to monitor inventories	
KEY ACTORS	Sales personnel	Absence due to sickness	
	Procurement personnel	Absence due to sickness	

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Developing your own OR Framework

Particulars		Adverse Scenarios	
KEY CLIENT	Farms	Pandemic (COVID)	IT Infra Breakdown
KEY PRODUCT	Imported Animal Feeds		
KEY PROCESSES	Importation	Delays due to Port shutdown	No major impact
	Delivery	Delays due to lockdown areas	No major impact
	Formulation	No major impact	No major impact
KEY SYSTEMS	Ordering system	No major impact	Delays in ordering
	Inventory monitoring	Lack of personnel to monitor inventories	Potential inventory shortages
KEY ACTORS	Sales personnel	Absence due to sickness	No major impact
	Procurement personnel	Absence due to sickness	No major impact

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Developing your own OR Framework

Particulars		Adverse Scenario	
KEY CLIENT	Farms	Pandemic (COVID)	Action Plans
KEY PRODUCT	Imported Animal Feeds		
KEY PROCESSES	Importation	Delays due to Port shutdown	Advance importations (3 months stocks)
	Delivery	Delays due to lockdown areas	Establish warehouse facilities (lockdown areas)
	Formulation	No major impact	-
KEY SYSTEMS	Ordering system	No major impact	-
	Inventory monitoring	Absence of personnel to monitor inventories	Stay-in arrangements
KEY ACTORS	Sales personnel	Absence due to sickness	Work from home arrangements
	Procurement personnel	Absence due to sickness	Work from home arrangements

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Enhancing your Company's Capabilities to Develop Organizational Resilience

- Well-managed companies will most likely survive adverse conditions and catastrophic events.
- Professionalizing all aspects of the company's operations will greatly help a company to plan for and anticipate potential crisis as well as adapt to adverse conditions outside its control.

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Professionalizing the Business (by JBR)

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Professionalizing the Business (by JBR)

Example: How to Survive the COVID Pandemic?
Strategic Thinking (FGD - Focus Group Discussions)

C — Cut and slash unnecessary costs. Look for cost savings measures. For example, eliminate the usual avoidable expense culprits such as representation and entertainment expenses. Look also into cutting electricity by using cost saving devices such as timers to switch-off aircons and lights at designated times. You can also check if your non-operations office staff can permanently work from home so you can reduce your office rentals and related office expenses.

O — Outsource non-essential operations. For example, accounting and bookkeeping, delivery and logistics, and even repairs and maintenance services can be outsourced to companies who specialize in these areas. Your operations will probably be more efficient (less headaches) and your manpower costs could be reduced significantly.

V — Venture in another market segment that can harnessed your current business expertise or in areas that you can easily get into given your industry experience. For example, from selling eyeglasses to selling plastic face shields, from selling fashion wear to selling fashionable facemasks, from fast food restaurants to on-line delivery food service, from producing luxurious scents or perfumes to producing niche alcohol and cleaning solutions.

I — Innovate and change your sales and marketing strategies. For example, from traditional outlets to direct marketing or on-line selling, from over-the-counter products to re-configuring your products to cater to niche customers, from employing sales personnel to automated ordering processes.

D — Divest, rescale, eliminate or transform your risk-prone investments or business segments that are negatively affected by the COVID pandemic. For example, you may want to close down and sell your tourism and travel-related businesses. You can also convert your car rental business to logistics and delivery services. Or you can transform your in-door restaurant business to an out-door dining experience.

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Measuring Operational Resilience

The Altman Z-score, a variation of the traditional z-score in statistics, is based on five financial ratios that can be calculated from data found on a company's annual financial reports. It uses profitability, leverage, liquidity, solvency, and activity to predict whether a company has a high probability of becoming insolvent.

- Researchers have found that the Altman Z Score to be a better indicator of a **company's resilience** than the market itself.

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Measuring Operational Resilience

One can calculate the Altman Z-score as follows:

Altman Z-Score = 1.2A + 1.4B + 3.3C + 0.6D + 1.0E

Where:

- A = working capital / total assets
- B = retained earnings / total assets
- C = earnings before interest and tax / total assets
- D = market value of equity / total liabilities
- E = sales / total assets

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Professionalizing the Business (by JBR)

	Company	Altman Z Score
1.	Jollipig	3.3
2.	San Michael	3.2
3.	Union Steel	2.0
4.	Agri Ventures	1.9
5.	BXO	2.2
6.	PALA PALA	1.7
7.	Red Zone	1.5
8.	Unique oily	2.3
9.	Lazaboy	4.0
10.	Chemical	1.9

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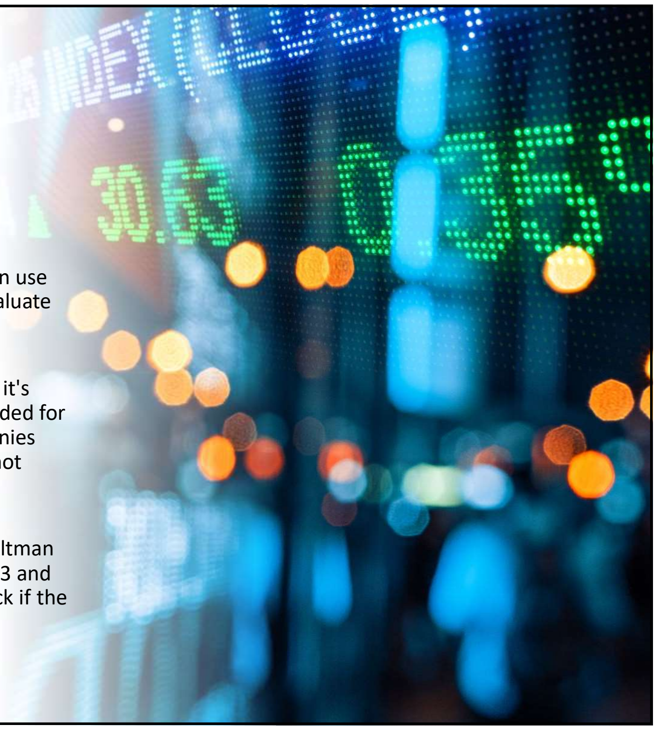
Measuring Operational Resilience

Traditionally, investors can use the Altman Z-score to evaluate the company’s financial viability.

A score below 1.8 means it's likely the company is headed for bankruptcy, while companies with scores above 3 are not likely to go bankrupt.

Investors may consider purchasing a stock if its Altman Z-Score value is closer to 3 and selling, or shorting, a stock if the value is closer to 1.8.



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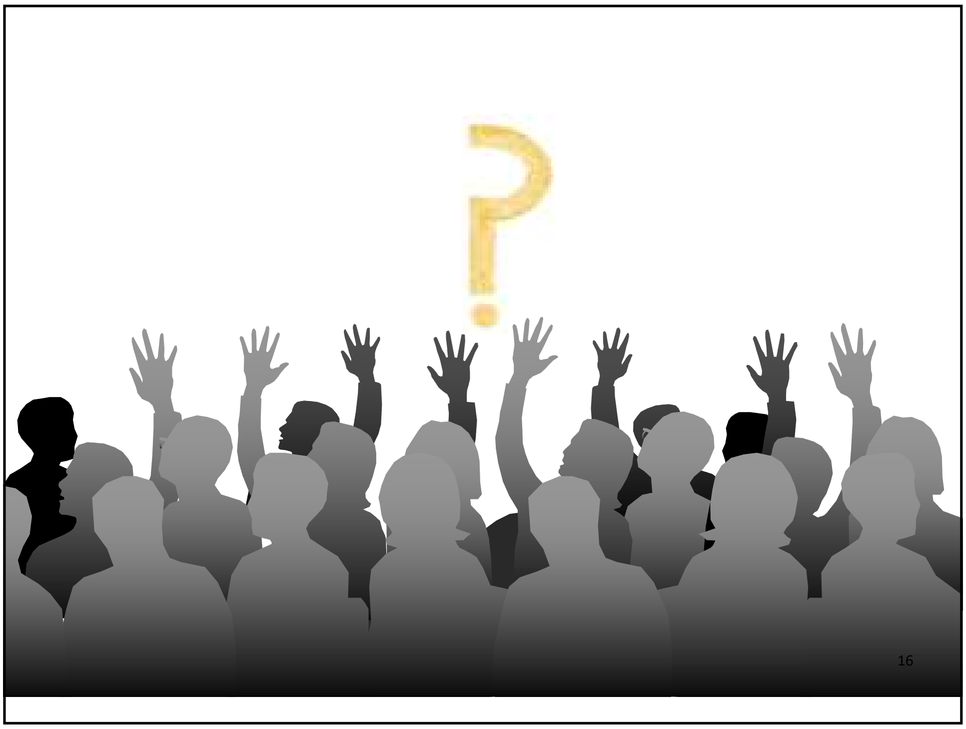

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