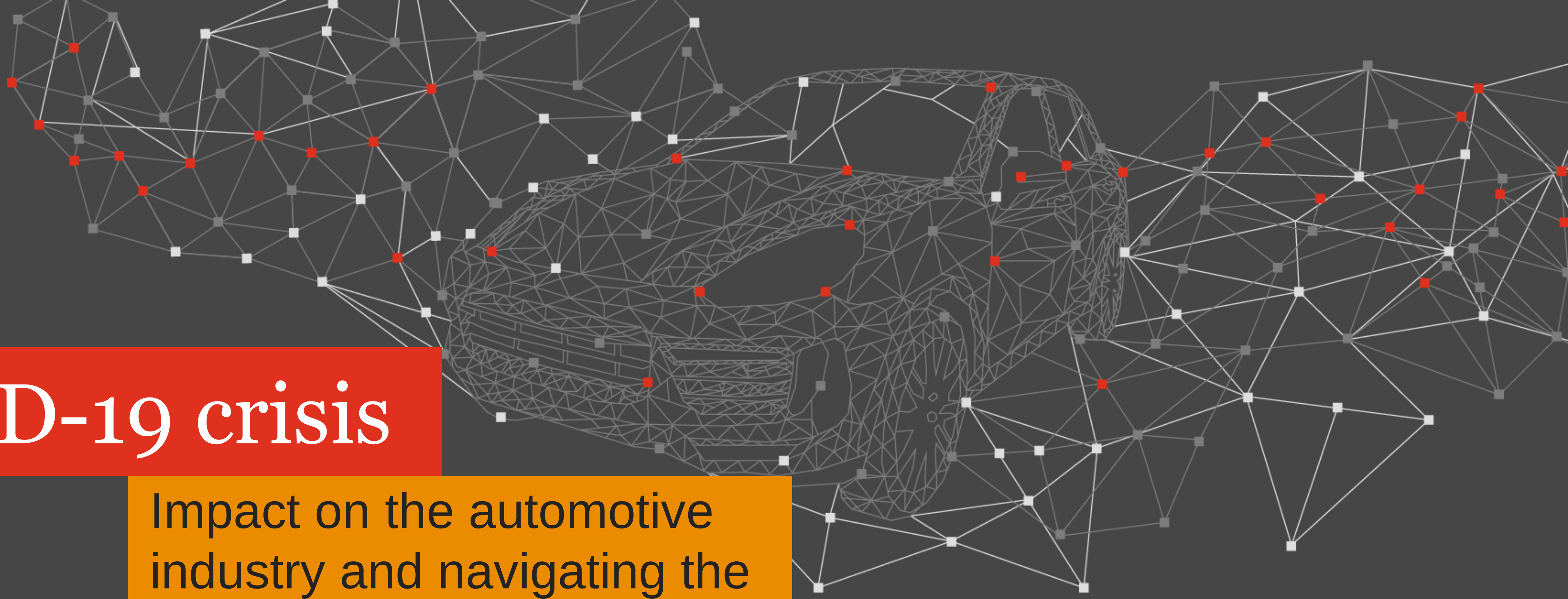

COVID-19 crisis

Impact on the automotive industry and navigating the turbulence

pwc

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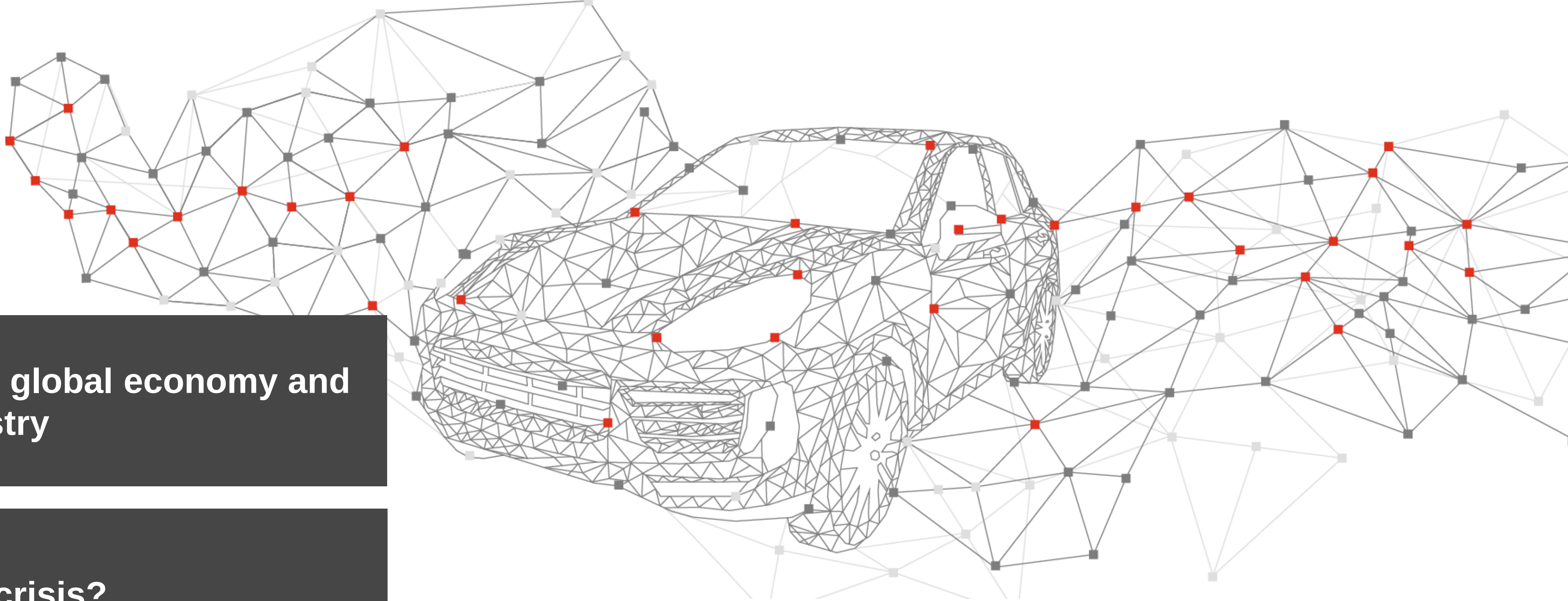
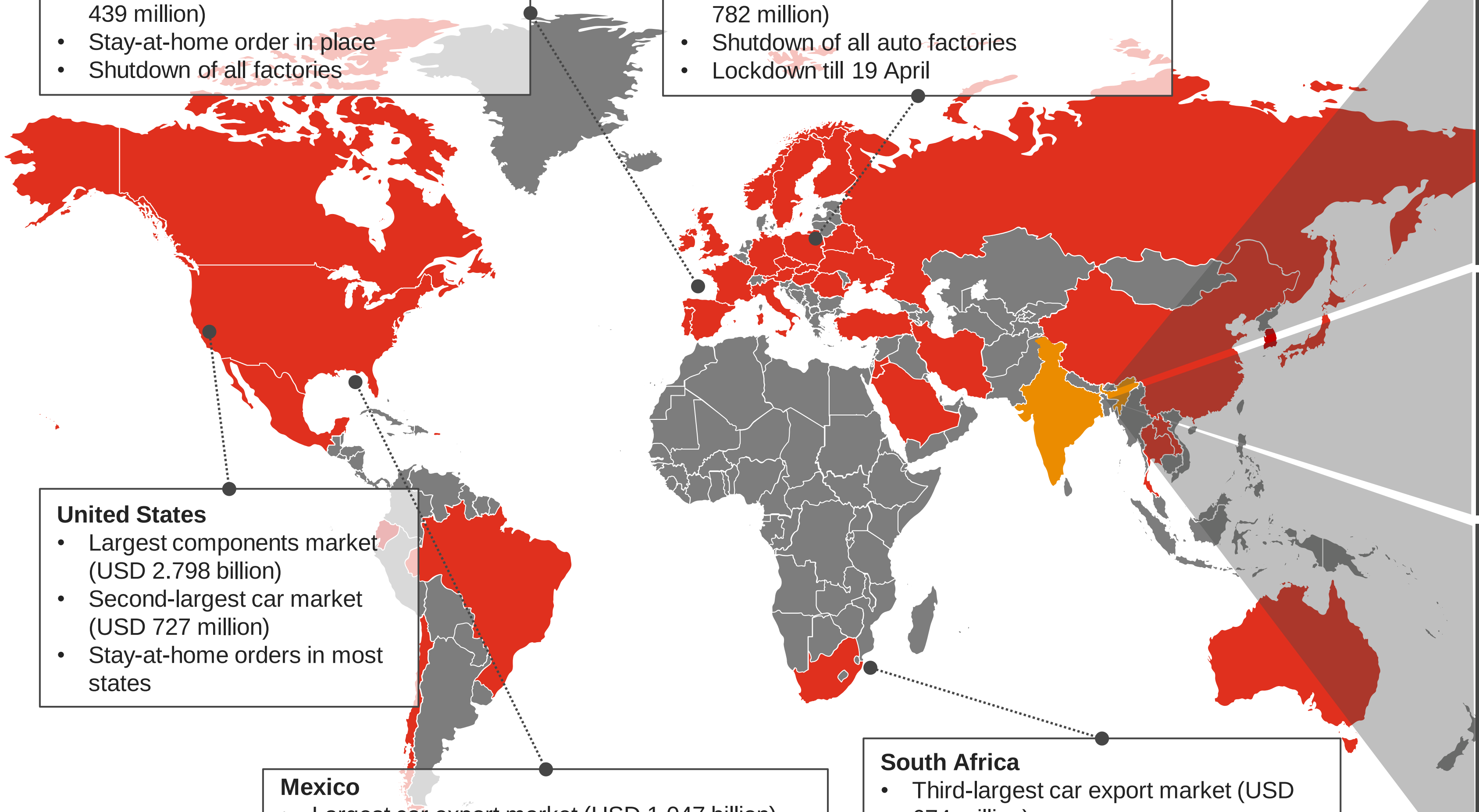


1

COVID-19: Impact on global economy and the automotive industry

COVID-19 has affected the global economy adversely



United Kingdom
- Third-largest components market (USD 439 million)
- Stay-at-home order in place
- Shutdown of all factories

Germany
- Second-largest components market (USD 782 million)
- Shutdown of all auto factories
- Lockdown till 19 April

United States
- Largest components market (USD 2.798 billion)
- Second-largest car market (USD 727 million)
- Stay-at-home orders in most states

Mexico
- Largest car export market (USD 1.047 billion)
- Ban on gatherings of over 50 people
- Declaration of emergency

South Africa
- Third-largest car export market (USD 674 million)
- 21-day lockdown

Global economy to shrink by 1% in FY21, predicts Goldman Sachs

- The global impact of the COVID-19 crisis is perceived to be larger than the 2008 financial crisis. Multiple monetary and fiscal measures such as postponement in tax collections and policy rate cuts need to be implemented to tide over this crisis.

In the short term, domestic demand will decline in India

- Health and welfare have become top priorities in India as the Government has enforced a 40-day lockdown.
- The COVID-19 crisis will have a direct impact on tourism, the hospitality sector, manufacturing industries and non-essential services.

India's major export markets severely hit; export of USD 9 billion worth of vehicles and components to North America and Europe stalled*

- **Approximately 31% of cars are exported to North America and Europe (USD 2.7 billion).**
- **Approximately 60% of components are exported to North America and Europe (USD 6.6 billion).**

Source : Goldman Sachs, Press research, PwC analysis and Department of Commerce, Ministry of Commerce and Industry, Government of India

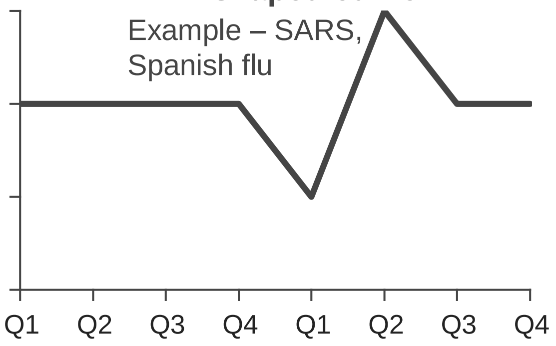
*Export data for 9M FY20 for 12 HS Codes (vehicles); 219 HS Codes (components)

Historically, there have been three potential recovery scenarios post economic shocks

GDP Growth %

Scenario 1: Optimistic

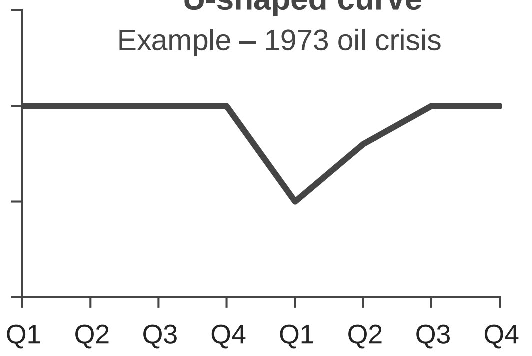
V-shaped curve



Rapid recovery, growth returns to normal, no loss of output

Scenario 2: Realistic

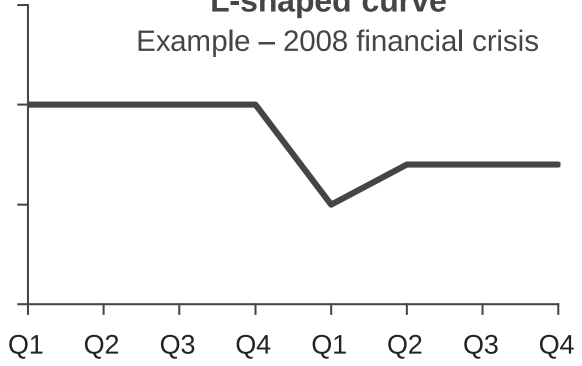
U-shaped curve



Shock breaks growth trend, some loss of output permanently

Scenario 3: Pessimistic

L-shaped curve

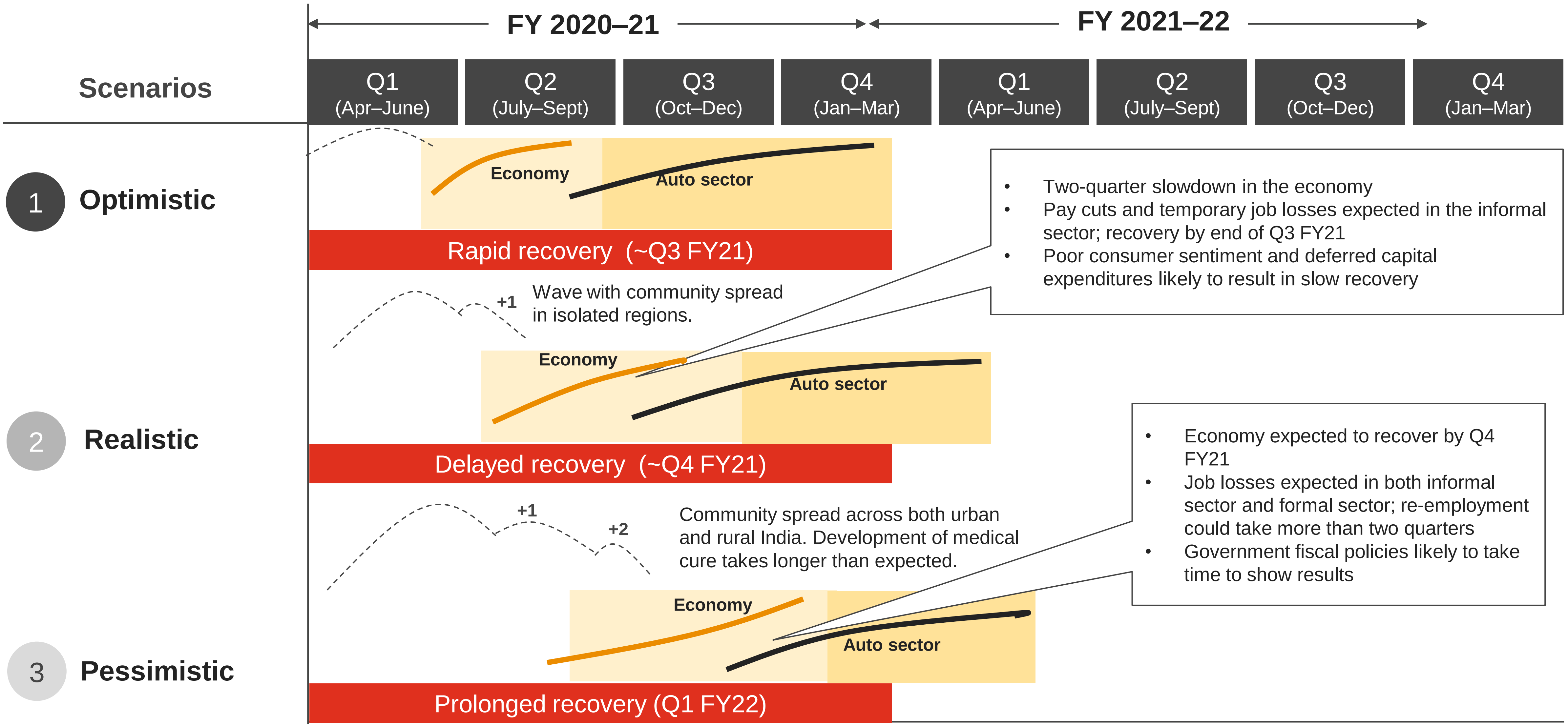


Real structural damage, lower long-term growth rate

	Scenario 1: Optimistic	Scenario 2: Realistic	Scenario 3: Pessimistic
Impact on public enterprises	• Monetary and fiscal response to the crisis (credit, liquidity push and policy rate easing)	• Sustained period of virus mitigation • Significant fiscal and monetary interventions	• Long-term structural damage, lack of resources for public spending • Major expenditure in healthcare and welfare
Impact on private spending	• Rapid rebound in household spending • Immediate pent-up demand seen	• Household and business confidence loss, postponement of high-ticket purchases • Major cracks seen in the financial system	• Large-scale unemployment, repeated waves cause unrest in the labour market • Domestic expenditure on essentials
Impact on the automotive industry	• Rebound in auto demand • Cost pressures in the short term	• Sales remain depressed, significant portion of demand lost • Likely shift to used car purchases	• Alternate supply chains, policy changes in procurement practices, trade agreements • Continued disruption of production and retail

Source: Harvard Business Review, Investopedia, marketplace.org and PwC research and analysis.

Three possible scenarios with different recovery periods*



*PwC analysis based on the situation as on 8 April 2020. Analysis and forecasts could change due to the rapidly changing external environment.

Factors impacting automotive demand over FY21*

Strong factor/high negative impact

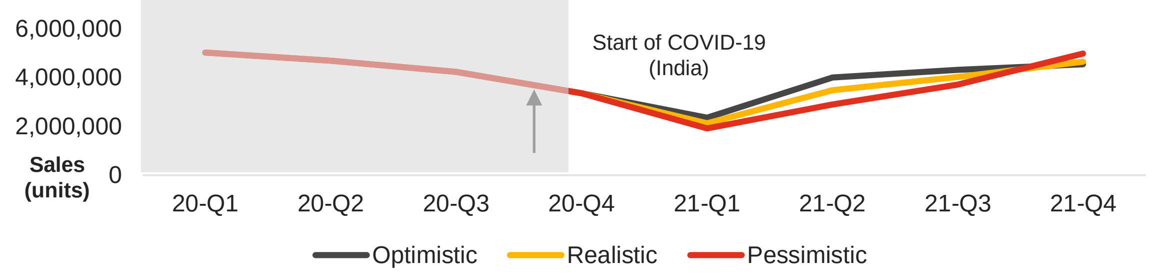
	Factor	Key parameter	Characteristic	Optimistic	Realistic	Pessimistic
Supply side	Supply (availability)	Original equipment manufacturer (OEM) – manufacturing capacity	Reduced production levels	◔	◑	◕
		Supply chain issues	Expected supply chain disruptions	◔	◑	◕
	Finance availability	Stability of the financial system	Financial system likely to undergo stress; government support expected	◑	◕	●
	New product launches		OEMs to defer product launches later than Q3/Q4 FY21	◕	●	●
	OEM initiatives	Vehicle discounts and incentives	High discounts from OEMs; unlikely to pass through BS6 price hikes	◑	◕	●
Demand side	Government and regulatory interventions	Tax cuts and other incentives	Government support expected to reduce impact of taxes and duties	◑	◕	●
		Compliance costs	Government help to liquidate BS4 stock	◑	◕	●
	Consumption demand	Consumer income	Job losses and pay cuts expected	◔	◑	◕
		Net worth	Asset prices expected to decline	◔	◑	◕
		Sentiment	Consumer and business sentiment to remain low	◕	●	●
		Mobility preferences	Increased preference for personal modes of transport	◔	◑	◑
		Vehicle finance rate	200–300 basis points lower than FY20	◑	◕	●
	Activity levels in the economy	Manufacturing sector activity level	To remain below normal	◔	◑	◕
		Service sector activity level	To remain subdued due to poor sentiment and periodic lockdowns	◑	◕	●
	Investment demand	Private capex	To be deferred to FY21	◑	◕	●
		Infra spend by the Government.	Boost in infrastructure spend by the Government post COVID-19	◔	◑	◕

*PwC analysis based on the situation as on 8 April 2020. Analysis and forecasts could change due to the rapidly changing external environment.

Strong factor/high positive impact

How the three scenarios will play out in each vehicle segment*

Two–wheelers (2Ws)**

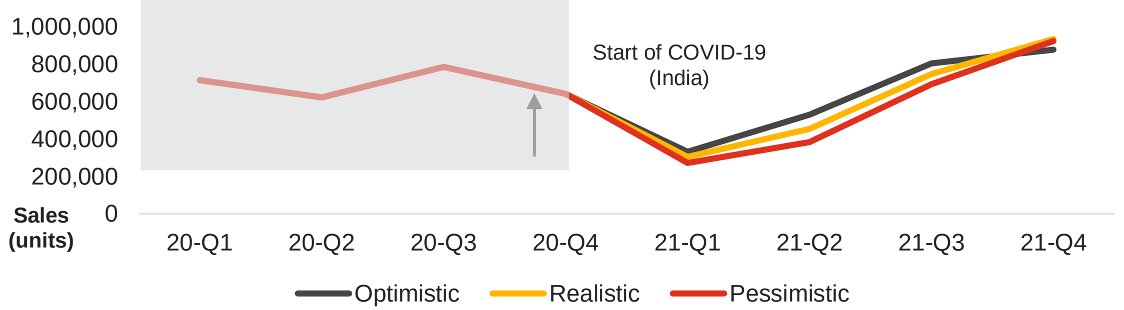


2019–20*	2020–21 (estimated)	*% change*
17.2 million	15.2 million	-12%
	14.2 million	-18%
	13.4 million	-22%

Key factors

- Preference for personal transport (changing mobility preferences) to be a key driver – used vehicle market to capture a significant share of this demand
- Informal sector – a key buyer of two-wheelers – affected significantly by the downturn
- Online sales to grow

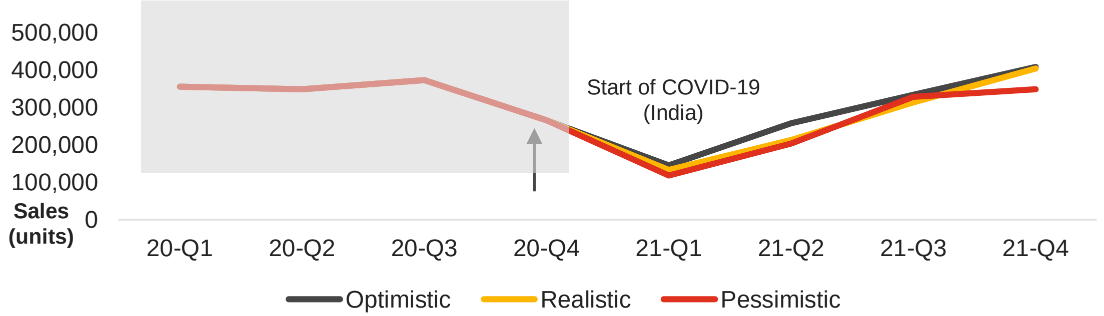
Passenger vehicles (PVs)†



2019–20*	2020–21 (estimated)	% change
2.75 million	2.53 million	-8%
	2.43 million	-12%
	2.26 million	-18%

- Passenger vehicles expected to show strong growth post recovery – mobility preferences for personal mode of transport to have a significant impact on demand
- Shared mobility segment to remain subdued in the coming months
- Segment downgrade likely by buyers – consumers that buy PVs/2Ws may go one segment and one variant lower

Commercial vehicles‡

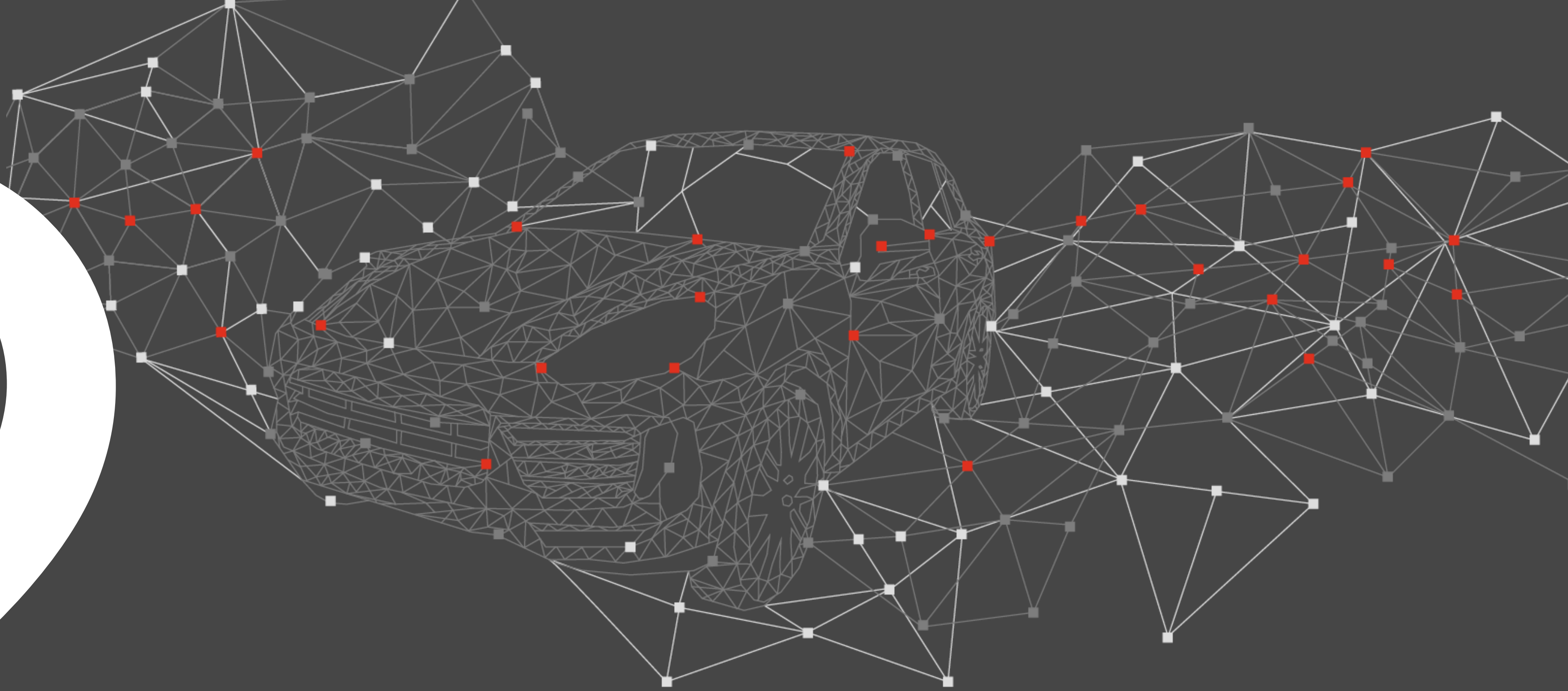


2019–20*	2020–21 (estimated)	*% change*
1.34 million	1.14 million	-15%
	1.06 million	-21%
	0.99 million	-26%

Optimistic scenario | Realistic scenario | Pessimistic scenario

- The commercial vehicle segment is already carrying excess capacity (GST impact, axle loading, movement of goods lower due to weak economy); with logistics disruptions to continue in hot zones, and with customers not in the investment mode, this sector will show a delayed recovery.

*2019–20 sales include March 2020 sales estimates based on sales reports in media by select OEMs. Data source for FY2020 YTD Feb 2020 – Society of Indian Automobiles Manufacturers (SIAM).
**†‡Classification as per SIAM. Commercial vehicles include three-wheeler goods carriers and three-wheeler autorickshaws (including N1,N2,N3 and M2,M3).
Note: PwC analysis based on the situation as on 8 April 2020. Analysis and forecasts could change due to the rapidly changing external environment.



2 How to navigate the crisis?

Automotive companies can adopt a phase-wise, three-step plan to initiate demand recovery

	Protect 3–6 months	Restore 6–12 months	Rebound >12 months
Strategic response	• Sense disruption impact • Protect customers and revenue	• Recover operations and resume planned growth trajectory for the period	• Prepare for growth • Invest in new opportunities
Liquidity management	• Preserve cash and create liquidity • Identify quick cash generation/saving opportunities	• Improve and sustain cash position through new initiatives	• Strengthen cash position to invest in new growth initiatives
Workforce engagement and productivity	• Safeguard employee welfare • Communicate and engage with employees	• Manage employee productivity and adapt operating model to new ways of working	• Reorganise to align with current business imperatives • Create a resilient organisation
Supply chain risk and resilience	• Assess supply chain disruption and monitor/manage risks • Protect supplies, orders and deliveries	• Evaluate supply chain gaps and restore operations to support business objectives	• Strengthen the resilience and visibility of the supply chain • Invest in agile and flexible supply chains
IT readiness	• Stress test information technology (IT) infrastructure • Resolve issues impacting business continuity	• Scale up IT resources to meet business requirements	• Strengthen IT infrastructure and security and develop scalability

“

Strategic response

Prepare for different scenarios – sense and respond quickly

	Scenario 1: Optimistic	Scenario 2: Realistic	Scenario 3: Pessimistic
Customer segments	• **Assess impact across core segments** – mass vs premium, rural vs urban, private vs fleet • **Protect core segments and prioritise segments** that are showing more resilience	• Sense any significant impact on **core segments** • Identify **new segments**/opportunities that are relatively insulated	• **Refocus business areas/segments under stress** • **Protect and grow** attractive business segments
Product/launches	• Evaluate any **product delay costs** and revise target costs • Assess launch readiness and identify opportunities to **accelerate launches**	• Review product launches basis segment trends • Prepare for **digital/soft launches** • **Assess launch readiness** and the ability to scale up new models	• Shelve product launches that do not meet the revised business case • Evaluate and invest in product solutions that meet the evolving customer needs
Channels	• Enhance promotional activities across **digital channels** • Enable **digital sales journey** • Evaluate network strength and expansion plans	• Optimise sales channels for revised demand projections • Invest in convenient **digital sales and marketing channels**	• Restructure sales channels to create more **flexibility and resilience** • Develop **integrated digital channels** to enhance visibility of demand and customer needs
Ecosystem	• **Evaluate financial health of suppliers** and **dealers** and develop support initiatives • Evaluate opportunities to enhance resilience of the ecosystem	• Support suppliers and dealers with **financial initiatives** to ensure sustenance • Review and enhance ecosystem continuity plans	• Explore opportunities for **strategic investment in distressed partners** • Identify alternative sources/channel partners in line with the revised strategy

Sensing demand signals and prioritising segments

Rural market recovery could be more prolonged

- Impact of the lockdown has resulted in rural output loss.
- Automotive rural demand may be under stress due to:
  - loss of income in agriculture and informal sectors impact demand (crop price reduction, losses for migrant workers)
  - continued lockdown of urban pockets may further impact rural economy (even if rural clusters open up)
  - low cash reserves and limited liquidity support from banks due to crisis in non-banking financial companies (NBFCs).

- In China, the impact of the COVID-19 lockdown on rural economy was estimated to be >USD 100 billion/month, with half of the surveyed households losing USD 282–704 per month.

Source: International Food Policy Research Institute

Increase in uptake of used vehicles

- The impact of COVID-19, along with upcoming environmental and safety regulations (e.g. BS6), will likely dampen the demand for new vehicles.
- An increasing number of buyers might choose to defer their new car purchase or shift towards buying pre-owned vehicles.
- Automotive OEMs will need to focus on strengthening their used-car business.

Shared mobility likely to be adversely impacted

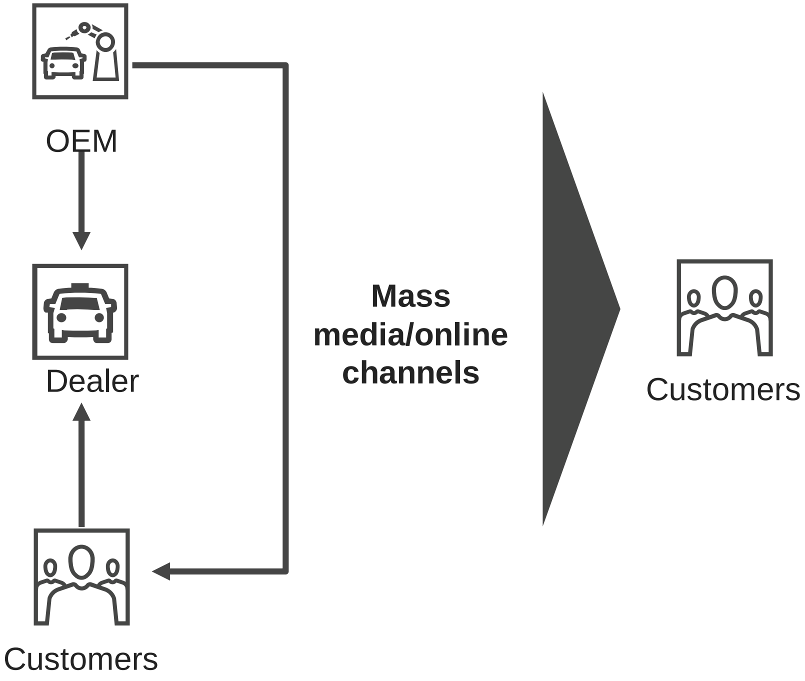
- Shared mobility start-ups have been negatively impacted by the COVID-19 crisis as services across the cities were disrupted and users inconvenienced.
- In the short run, consumers are likely to prefer self-driven rides.
- OEMs who were considering investing in shared mobility play may identify opportunities to invest in the space at better valuations.

- 66% of Chinese consumers indicated a preference for private vehicles for commute post the COVID-19 crisis, as compared to 34% before the crisis, according to a survey by a global market research firm.
- Preference for taxis and car-hailing services went down by 15% post the COVID-19 crisis.
- Public modes of transport were the most impacted, with a decline of 32% in preference post the COVID-19 crisis.

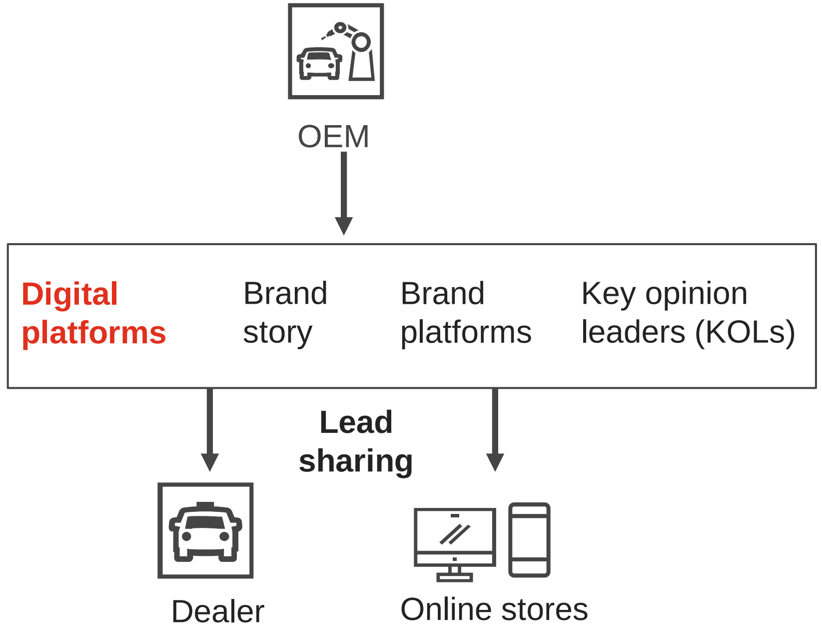
Source: IPSOS Impact of Coronavirus to new car purchase in China

OEMs will need to leverage digital sales and promotion channels to enhance engagement with customers

Traditional model: Lead generation primarily driven by dealers



Increased focus on OEM-led lead generation



Key considerations

Offline lead generation and sales promotion activities have been deeply impacted by the COVID-19 crisis.

OEMs can proactively engage with prospective buyers through digital channels and share the leads with their dealer partners.

For digital natives, the trend towards online sales may get accelerated in the post COVID-19 environment.

Managing liquidity

Importance of cash while dealing with the crisis

Global uncertainty

Requirement of a robust cash forecast

Why is it important to manage liquidity?

01 Cash visibility

02 Foundation for cash-generation initiatives

03 Process improvement

04 Rapid decision making

Indicative step-wise plan –what, how and when

Week 1 – understand the situation

Obtain historical financial data

Understand the key cash drivers and current cash position

Week 1 – cash outflows visibility

Understand quantum, ageing and periodicity of payments

- Prepare supplier-wise weekly payment plan
- Classify into statutory payments, critical/contractual payments and discretionary expenditure
- Review pipeline expenditure

Week 1 – cash inflow visibility

Understand the quantum, ageing and periodicity of recoverables

- Obtain weekly detailed collection plan
- Monetise non-core/surplus assets

Week 2 onwards – improved cash conversion

Seek product margins and product cash conversion time

- Consider changing sales and production plan

Seek key vendor contracts and payment terms

- Identify vendors offering longer credit terms or discounts

Implementation of the cash conservation and liquidity management office (CCLMO)

Members – representatives of the CFO, treasury, payables and receivables teams

Role and Agenda of the CCLMO

Daily meetings with various departments

- Prepare daily payment requests
- Cost benefits of delaying capex, research and development (R&D) and onboarding
- Accelerate refunds/recovery processes, identify opportunities for bill discounting
- Capture cost-reduction ideas

Weekly meetings

- Actual vs forecast variance
- Update of forecasts

Regulate the activities each day and at each stage

Certain working capital levers to conserve cash

Debtors

- Proactive customer dispute management process
- Collection-focused key performance indicators (KPIs)
- Increase invoice frequency
- Negotiate advance payment terms

Payables

- Prioritise payments
- Ensure process compliance
- Realise discounts/rebates
- Renegotiate credit terms
- Consolidate supplier base

Inventory

- Align target stock levels with supply chain
- Identify alternate sources

An example of a direct 13-week cash flow forecast

This is an illustration and may change depending on client needs.

13-week cash flow forecast – indicative format															
Weeks		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Total
Cash inflow															
Collections from outstanding AR															
Customer 1															
Customer 2															
Customer 3															
Customer X															
Customer XX															
Collections from fresh invoices															
Product/project/service 1															
Product/project/service 2															
Product/project/service 3															
Product/project/service x															
Product/project/service xx															
Others															
Total cash inflow															
Cash outflow															
-Statutory payments															
Expense 1															
Expense 2															
-Contractual/critical payments															
Expense 1															
Expense 2															
-Discretionary payments															
Expense 1															
Expense 2															
General costs – total															
Tax payouts															
Total cash outflow															
Total cash from operations															
Cash flow from financing and investing															
-Capital expenditure															
-Investment															
-Inflow from monetisation of surplus/idle assets															
-Loan repayment															
-Interest payment															
-Other inflows															
-Other outflows															
Net inflow/outflow from financing and investing															

Managing people and organisations in the new normal

Key workforce focus areas to consider for the future

We visualise two horizons of action in which the focus areas will gradually shift and evolve.

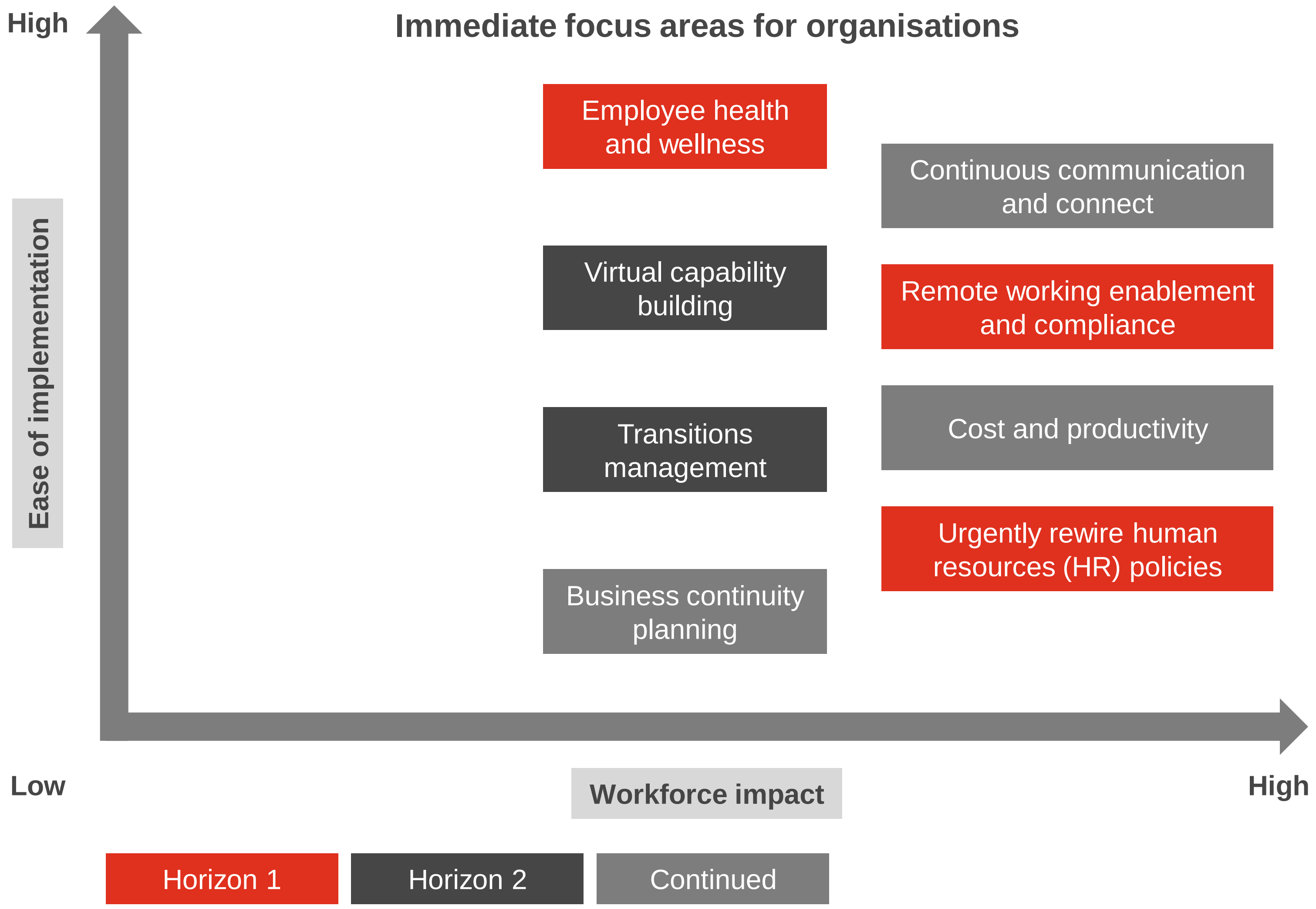
Horizon 1: Immediate/short-term

- Timeframe: 2 weeks–2 months
- Focus: Keeping the lights on through cost, compliance, care and commitment

Horizon 2: Mid-term

- Timeframe: 2–6 months
- Focus: Building the momentum and nurturing the ecosystem to adapt to the new ways of working

There will also be clear focus areas, where continued focus would be imperative in both the horizons.



What are organisations doing to prepare for the long haul?

Key focus areas

Remote working enablement and compliance

- Testing and enabling technologies to support collaboration and communication
- Putting together remote working policies and data security compliance

Business continuity planning

- Carrying on global mobility and business continuity with customers
- Aligning with the leadership for business continuity
- Augmenting the workforce for key activities/tasks that need support
- Conducting scenario-based crisis preparedness audits

Continuous communication and connect

- Constantly communicating with employees to notify them about measures taken amid COVID-19
- Sharing knowledge nuggets from credible sources like the World Health Organization (WHO)
- Creating a digital workplace of the future

Cost and productivity

- Engaging in workforce planning and management
- Refining performance expectations for employees
- Planning for increase in absenteeism and work refusal
- Drawing up productivity plans for senior executives and white- and blue-collar employees

Virtual capability building

- Managing virtual capability across an organisation
- Building leadership capability for a virtual world
- Coaching leaders and staff for morale and resilience
- Building future-focused capability building and **digital fitness**

Transitions management

- Managing compliance and brand management around workforce transitions
- Coaching and providing career transition support for impacted staff
- Creating plans for scenario-based workforce transition

Urgently rewire HR policies for relevance

- Realigning hiring, onboarding, exits, compensation and benefits (C&B), performance management system (PMS) and learning and development (L&D) policies to support the organisational strategy and the current scenario

Employee health and wellness

- Conducting health and wellness training sessions
- Revising leave, travel and hospitalisation/insurance guidelines
- Managing employee morale through care and communication
- Establishing employee support services, e.g. a dedicated hotline number

Key industry-wise considerations for managing productivity

Focus areas for the automotive industry

Accepting the new normal

- An otherwise brick and mortar sector has shown tremendous resilience to transition to work from home (WFH).
- The sector should prepare for a slow return to normal and manage plans around that.

Value stream management

- Depending upon the direct and indirect suppliers, the automotive industry's plans of ramping up are going to be different.
- From an employee productivity perspective, the downtime could be used to build newer partnerships and avenues.

Workforce morale

- Employee costs not exceeding 10% of total costs for the sector; yet the success dependence on employee inclusivity is high.
- Working with executives, white- and blue-collar employees, contractual staff and unions to manage scenarios for sustenance.

Productivity

- Productivity is going to be hugely governed by how productivity is defined in current circumstances.
- Value to be delivered as a productivity norm by each function and level will be critical to be defined and focused upon.
- The sector should capture learnings from the COVID-19 crisis.

Newer norms and capabilities for the future

- Managing virtual capability as a way of life.
- Building leadership capability for a virtual world.
- Coaching of leaders and staff for morale and resilience.
- Stress on future-focused capability building and **digital fitness.**

Contributing to the ecosystem

- An inclusive cash flow and productivity management plan that takes into consideration the success of the entire value chain will be a key consideration.
- Planning with ancillaries, suppliers and dealer/distributors for newer ways and newer propositions could be another key consideration.

Preparing for the new customer and employee expectations

- Will the definition of mobility and social distancing change human preferences?
- Could workforce models across the entire value chain be shifted to core and build service providers for non-core areas across all players?

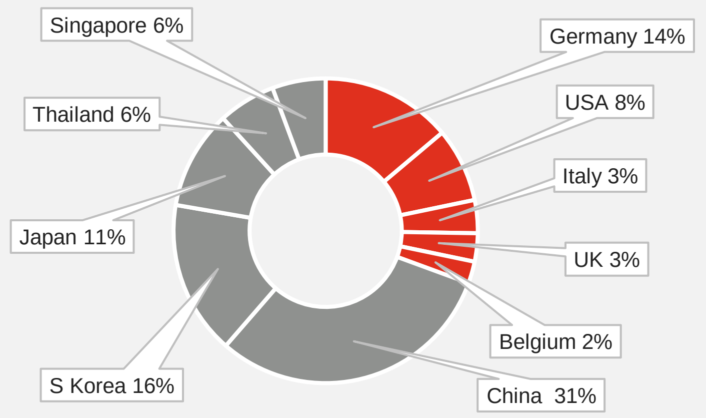
The long-term bets

- Organisations in the sector should look to ring-fence their critical talent.
- Upskilling talent for the future as employees will have to be doubly productive as normalcy comes in.
- Focusing on talent pipeline and making sure to engage them.
- Finally, working on the new processes for enablement and decision making.

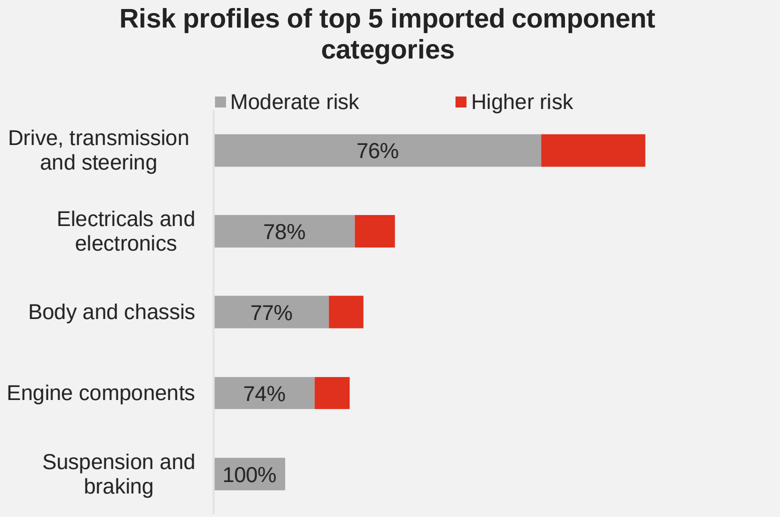
Supply chain risk and resilience

The global supply chain disruption will have a continued impact on India for at least six months.

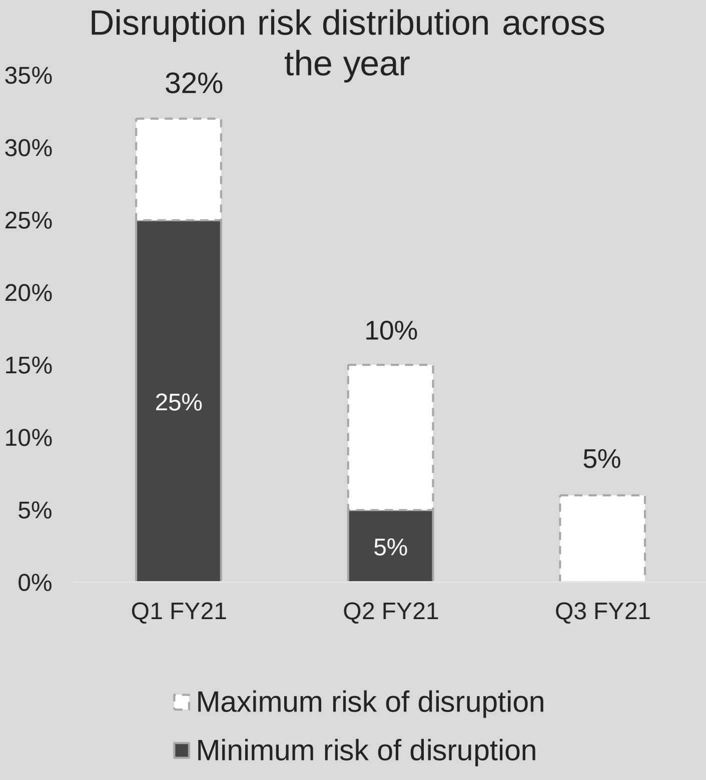
31% value from the top 10 auto component source countries is currently at higher risk



Top 5 at-risk auto components constitute 79% of all component imports by value



Probable disruption risk to last 7–9 months, peaking in Q1 FY21*



*Based on the assumed risk profile of top 5 at-risk imported components

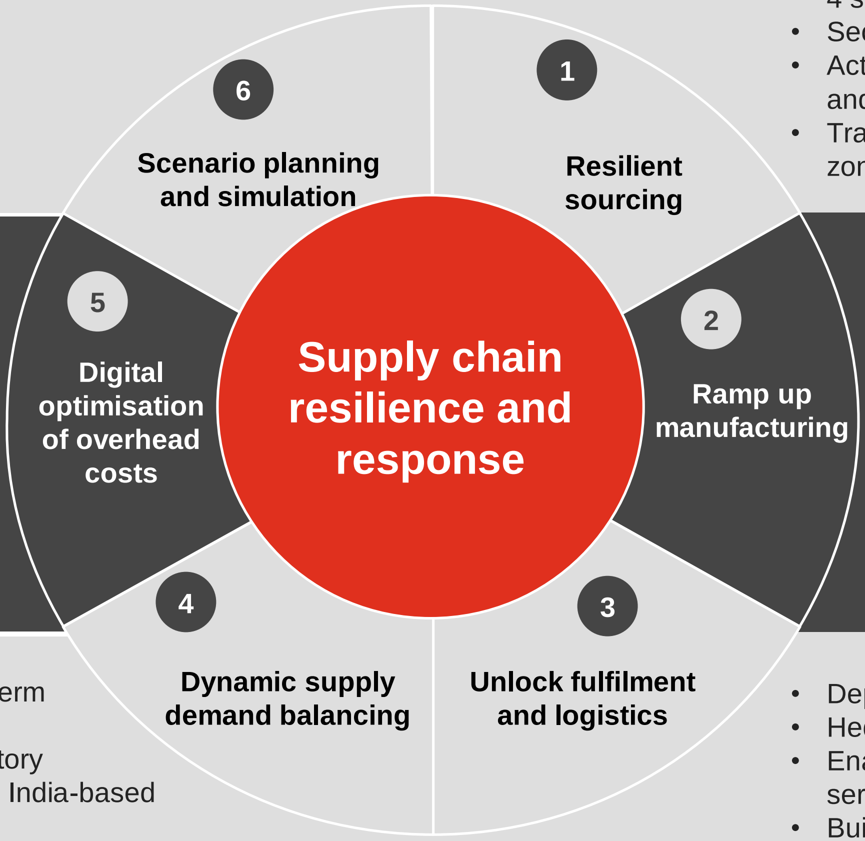
Country risk category	Major import countries	Assumed disruption profile
Higher (At peak/yet to peak from the COVID-19 disruptions)	The US, Germany, Italy, Spain, the UK, France and Belgium	Peak disruption in May (>50% risk of disruption), with disruption risk easing starting in October
Moderate (COVID-19 disruptions peaked and the countries are recovering)	China, South Korea, Japan, Thailand and Singapore	Peak disruption in March (25% risk of disruption); with disruption risk easing starting in September

Source: Worldometers, media reports, PwC analysis

Supply chain resilience and risk management

- Simulate supply chain scenarios based on ramp up expectations
- Identify ramp-up impact on availability and supply capability
- Design responses to enable revenue growth
- Simulate supply scenarios with regard to dynamic changes in the spread of COVID-19 globally into near control, peaking and declining rate regions

- Evaluate geographical risk (China, Europe and the US) to shift share of business (SOB) to India
- Build visibility and resilience-readiness across Tier 1, 2, 3 and 4 suppliers
- Secure allocated supplies and overtime assembly capacity
- Activate preapproved parts, risk management (RM) substitutes and alternated suppliers
- Transport available inventory to areas away from quarantine zones and ports



- Zero-based costing (ZBC) approach to all overhead costs
- Reduction in travel spend
- Enable digital connectivity
- Revaluate office and dealership real estate costs

- Focus and allocate capacities on priority products
- Enable workforce with safety, hygiene, healthcare services and incentives
- Staggered shift operations to enable social distancing
- Design a resilient manufacturing operation

- Adjust customer allocations to optimise profits on near-term revenue or to meet contractual terms or higher demand
- Shape demand by offering discounts on available inventory
- Introduce new products previously destined for China to India-based plants
- Focus on aftermarket parts availability and enabling services at convenience points or door delivery
- Engage customers proactively about delays

- Deploy asset-based service providers
- Hedge export logistics with contract and spot rates
- Enable functioning of parts warehouses (WHs) by engaging service providers (SPs) for labour availability
- Build resilience in mode by leveraging multi-modal infrastructure of rail and road
- Inbound and parts warehouse automation

IT readiness and security

Information technology readiness and security

Target work from home (WFH) workforce/functions

- Identify functions and number of employees and infrastructure.
- Ensure secure practice awareness.
- Provide contact details of IT and information security (IS) teams.

IT and security tools

- Provide sufficient internet connectivity and bandwidth.
- Ensure 24x7 availability of crisis management team.
- Ensure virtual private network (VPN) coverage in the complete network.
- Provide laptops/mobiles/desktops/audio-video enabled voice over internet protocol (VOIP).

IT and cyber security governance

- Make sure that a central repository of critical process documentation is available.
- Access management processes and policies for different time zones/shifts.
- Have in place stringent security policies for the internet.

Hardware and data centres

- Provide policy clarity on personal device usage and special attention.
- Issue laptops/handheld devices to the extent possible.
- All data centres to be equipped with live/hot network.
- Have a robust and scalable security infrastructure.
- Ensure IT services partner is adequately staffed.

Software and licensing

- Have an optimum mix of traditional and cloud-based solutions.
- Prioritise critical daily usage software.
- Prioritise software with easy remote access and installation.

Bandwidth sizing and data backup

- Make sure internet service provider (ISP) and VPN solutions have both upstream and downstream sufficient bandwidth.
- Plan for peak-load scenarios.

Cyber security considerations

- Be aware of possible modus operandi of cyberattacks.
- Authorise resources based on relevance.
- Plan for multifactor/adaptive/risk-based authentication.
- Update identity management solutions.

Remote working ways

- Train workers with remote working nuances.
- Disseminate guidance templates to make remote working self-explanatory.

3

Building for the medium term: Every crisis is an opportunity

Reorganise for future growth while transforming the cost structure

PwC's Fit for Growth framework

Company's strategy

- Reprioritise strategic initiatives and investments to make organisations fit for future.

Build industry-leading capabilities

- Invest to build 3–6 differentiating capabilities (e.g. technology, service levels, Agile SC and low costs)
- Invest in start-ups to acquire futuristic capabilities (e.g. digital tools, blockchain, electric vehicle and advanced driver-assistance systems)
- Co-create with peers for shared investment in new technologies

Identify higher value-added priorities for investments

Transform cost structure

- Rationalise stock keeping units (SKUs) and programmes
- Drive production and logistics efficiencies
- Amend vendor contracts for payment and pricing terms (e.g. large-size enterprise resource planning [ERP] projects)
- Reduce supporting infrastructure and tools cost (e.g. manufacturing assets)
- Eliminate low value-add work

Enable and sustain

Reorganise for growth

- Define the right mix of products and services portfolio for the future
- Ensure finance continuity
- Enhance innovation pipeline
- Invest in special projects (e.g. brand positioning, process streamline and automation and lean)
- Rationalise roles and resources
- Define the project management office (PMO) for execution

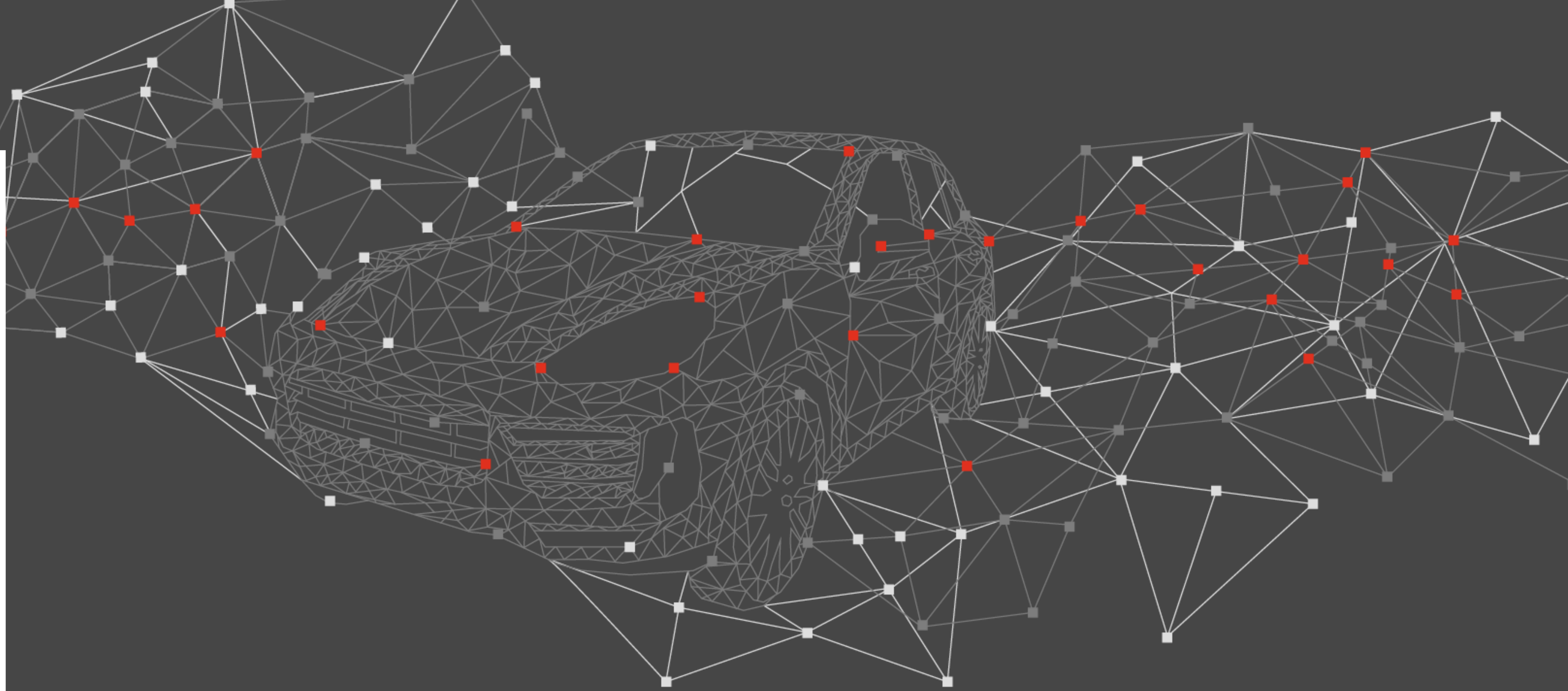
Enable change and cultural evolution

- Minimise management through spans and layers
- Improve consistency through standardisation
- Improve talent effectiveness through reskilling and defined programmes
- Optimise workload by redefining service levels and process change

Every crisis is opportunity to emerge stronger

Low attractiveness | High attractiveness

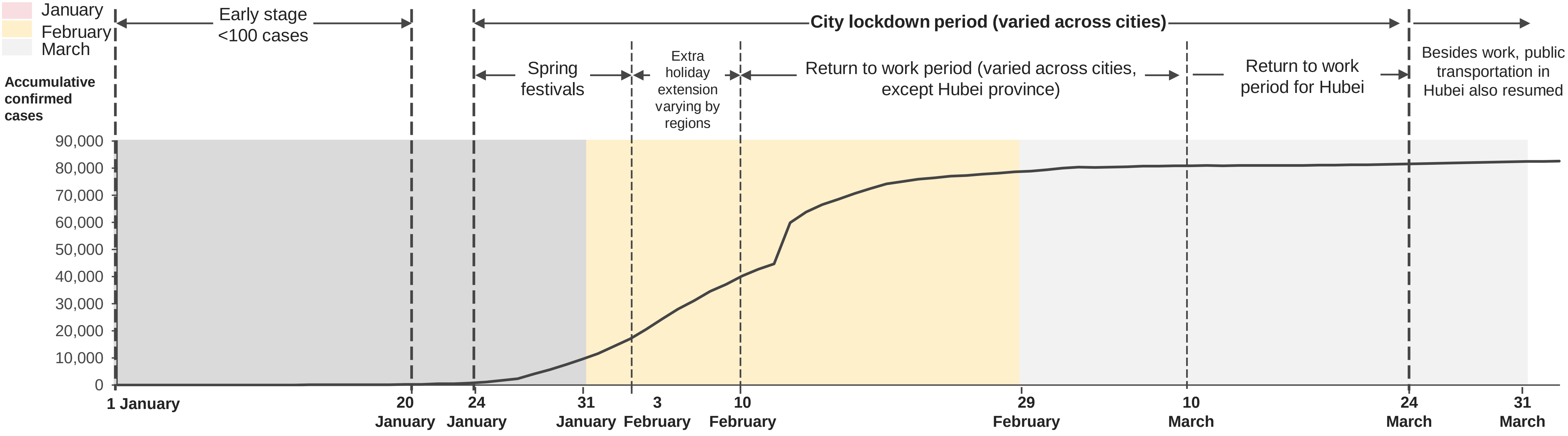
Strategy	**Business restructuring** Create independent scalable business units with resiliency for future.	**Differentiated capabilities** Leverage low valuation to acquire capabilities for future through mergers and acquisitions (M&A).	**Unlock value** Identify low-performing businesses and assets for sell-off to improve liquidity.	**Product portfolio** Develop new products considering new customers (Tier II and III) and their health, hygiene and connectivity needs.
Front end	**New business opportunity** Shared mobility concerns can open up increased 2W, PV and used-vehicle sales and pay-per-use model.	**Increased online sales** Concerns about visiting showrooms will lead to online/digital sales and marketing processes (manpower and overhead cost savings).	**Re-evaluate retail format and network** Network footprint and showroom sizes need to be revaluated considering dealer viability.	**Doorstep service** Service and sanitise vehicles on the doorstep to bring in hygiene transparency, thereby reducing service centre footprint.
Supply chain and operations	**Be decisive** Considering financial viability for the future, decide on operations restructuring, leadership, and investments on hold.	**Focus on data** Build a digital thread across operations for faster decisions, lower human intervention, pre-emption of financial loss and remote support.	**Build future-ready supply chains** Redesign supply base (on/offshore, critical parts, alternative material) real-time risk profiling (e.g. integrate blockchain).	**Manufacturing. and office space redesign** Reduced operations expenditure (e.g. lease, energy and supplies) considering optimised manufacturing (lower production)/office space (remote work).
Workforce	**Policy restructuring** Restructure HR policies (e.g. health, remote working, travel, visitors, immigration, leaves, pay) through crisis learning.	**Contract restructuring** Revisit labour union contracts (e.g. pay, leaves, benefits) for shared risk-impact ownership for collaborative crisis management.	**Shared services and IT** • Save through shared services like legal tax, finance and administration. • Build scalable IT backbone for online and remote needs.	**Multi-skilled workforce** Understand the need for multiskilling and conduct relevant training programmes (e.g. coding) for the workforce.



4 Learning from China’s COVID-19 experience

The impact of COVID-19 on China's automotive industry

Accumulated confirmed cases of COVID-19 and the impact period



PV sales volume	January	February	March
2020	1.72 million units	0.25 million units	1.04 million units
2019	2.16 million units	1.17 million units	1.75 million units
% change	**-20.4%**	**-78.6%**	**-40.4%**

Source: China Association of Automobile Manufacturers (CAAM), National Health Commission and PwC analysis

Note: Confirmed cases till 31 March 2020

Major impact on the auto industry and related responses

Major impact and challenges

Disrupted supply chain

OEMs stopping production

- The outbreak has affected OEMs located in Hubei province the most. Other regions such as Guangzhou and Zhejiang have also been severely affected.

Disrupted supply chain

- In China, about 40% of the production plants and R&D centres of the world's top 10 suppliers are located in the severely affected regions.
- Due to the high degree of integration and interdependence of value chain, the replacement of suppliers is not practical, and the impact on upstream enterprise will gradually be transmitted downward.

Sluggish customer demand

Postpone customer demand

- As a necessity with long-term decision-making cycle, most of the demand will not disappear, but it may get postponed to Q2-Q4 2020 or to 2021 due to the pandemic.
- The pandemic might stimulate the demand for first-purchase opportunity, but the precise demand remains unknown.

Shrinking purchasing power

- The epidemic had the greatest impact on the service industry and affected people's disposable income, thus leading to shrinking purchase power.

Suspended offline sales

Major impact on OEMs

- Suspended offline marketing activities
- Delayed new product launch plan
- May also report additional losses due to the discontinued operations

Major impact on dealers

- Suspended offline sales and promotion in 4S stores
- Delays in new car delivery due to suspension of logistics and staff shortage
- Stagnation of after-sales service, due to staff shortage and rotation

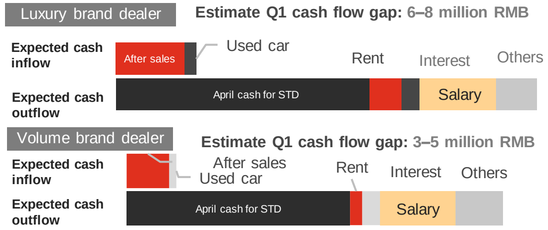
Huge cash flow pressure

Major impact on OEM and suppliers

- OEMs and suppliers are experiencing cash flow pressure due to declining revenue.

Major impact on dealers

- <30% of dealers have enough funds to operate functionally and the rest can only maintain normal operation for >3 months.
- Average funding gap for volume brand dealers is about 3–5 million, for luxury brand it may up to 6–8 million



Major reactions and response

Recovery of supply chain

- Continue production and operation to generate revenue for both OEMs and suppliers.
- Enhance the construction of supplier risk prevention system and build ecosystem to resist risk together.

Seize first-purchase demand

- Develop a marketing strategy to address consumers' current emotions.
- Focus on demand in Tier 3 and 4 cities.
- Focus on compact model.

Online-offline integration

- Integrate online and offline activities for operation.
- Promote more new channels of online marketing and increase the conversion rate via active engagement with potential customers.

Enhance cash flow management

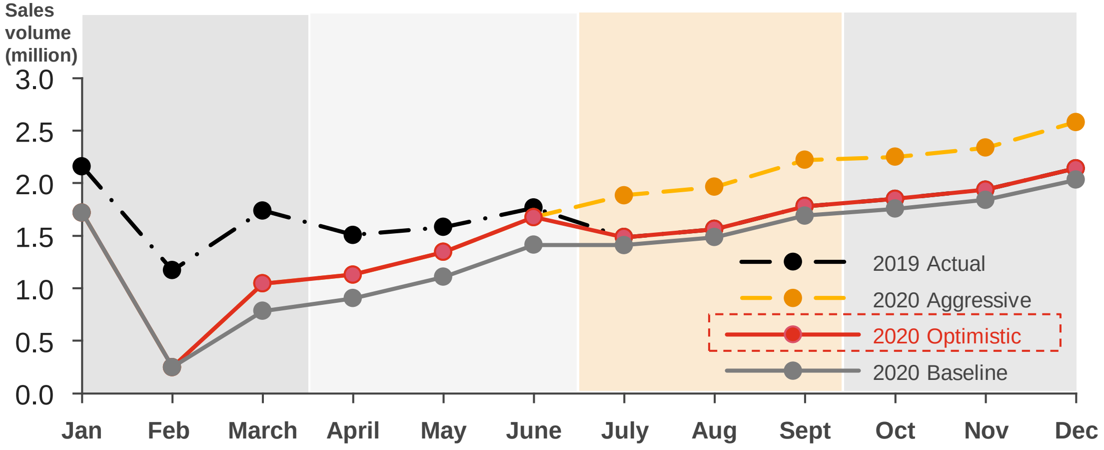
- Dispose of distressed assets and improve the ability to optimise capital structure and restructure.
- Increase financial support to strengthen cash flow forecast.
- Cut unnecessary costs through labour and other expenses.

Source: PwC analysis

Sales forecast and resumption of work

Overview and projection for China's automotive market: The sales volume plunged in January and February, and while the market is likely to recover in July, it is expected that the overall 2020 sales volume will drop approximately 10–15% compared to 2019.

Estimated volume of PV sales in China in 2020



Source: CAAM and PwC analysis

- **Actual market demand for Q1:** The January and February sales in 2020 plunged by 20% and 79%, respectively. The sales volume in March is expected to decline by about 40%
- **Forecasted market demand for two-wheel drive, high range (2H):** Starting from Q2, customer demand will recover gradually and the sales volume might jump back to the 2H purchase level in 2019.
- **Forecasted overall impact**: Based on the forecast, the total sales volume of new cars in 2020 is likely to **drop by approximately 10–15%**, compared to 2019.

Status on work resumption*

OEMs

Chinese OEMs:

- The average resuming capacity utilisation rate is over 70%, and it is expected that production will resume from April.
- Chinese OEMs remain optimistic for the future and will maintain the planned schedule, going forward.

Foreign OEMs:

- It is estimated that foreign OEMs are resuming about 50–60% of their normal operations.

Suppliers

- Suppliers will resume work earlier than OEMs.
- Chinese suppliers who mainly sell products to local OEMs are recovering at a faster pace compared to those who heavily rely on exporting.

Dealers

- Resumption of work rate – about 95% of dealers have resumed work.
- Customer traffic – returned to approximately 60–70% compared to last year.
- Sales efficiency – returned to approximately 60–65% compared to last year.

*Statistics till 31 March 2020

Government of China's support for the industry's recovery

Auto market incentive policies

Extending subsidies for NEVs

- Subsidies on purchase of neighbourhood electrical vehicles (NEVs) have been extended for two years till 2022

Exemption on purchasing tax extended for two years till 2022

Subsidies for used cars

- Subsidies to be provided for purchase of State 3 emission standard used cars
- 50% reduction in value-added tax (VAT) for enterprise registered used car (2%)
- Exemption in VAT for personal used car

Lifting restrictions on car plates

- Restrictions on the number of car plates issued in Guangzhou, Shenzhen and Hangzhou provinces have been lifted

Financial incentives for enterprises post resumption of work

Insurance support

- Social insurance expenditure extension without overdue fine (within three months)
- Housing fund expenditure extension without overdue fine (before June)
- Tax payment extension for three months

Financial support

- 50% interest subsidies in one year
- Increase in credit loan quota and lowered financing cost

Tax incentives

- Property tax cut for at least two months for small- and medium-sized enterprises affected by the pandemic

Safety production support

Daily sanitisation and medical care

- Daily sanitiisation for plants and offices
- Newly added isolation area and medical area
- Closed-production area

Staff care supports

- Real-time guest and staff registration
- Sufficient masks for staff in plants and offices
- Centralised pickup and drop-off management for staff
- Maintenance of safe distance in workspace
- Centralised meal supply and management

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