Formulation of Generic Injectables

Investment pitchbook

September 2025

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Executive Summary

Attractive Investment Destination

- **Pakistan** is emerging as a **regional powerhouse**, with a **reformed economy** (inflation stabilized at the lowest level in the past 50 years and GDP expected to cross USD 3.3T by 2050, with stabilized inflation and currency) and **vibrant talent** (7^{th} largest global workforce, with 64% of the workforce under 30)
- Investors can count on **strong government support**, including accelerated licensing and tax incentives under industrial development schemes

Significant Reliance on Imports for Injectables

- Despite having a mature pharma ecosystem, Pakistan still relies heavily on imports to fulfill demand for injectables, which accounted for **USD 650Mn+ in imports in 2024** (expected to approach USD 1Bn by 2030), with non-patented injecatbles accounting for 65% of imports
- With a growing and ageing population, **Pakistan is expected to experience a 7% CAGR increase in demand for injectables**, specially for cancer, autoimmune, and chronic diseases like rheumatoid arthritis and multiple sclerosis

Viable and Attractive Opportunity

- Investors have the opportunity to develop and operate a **generic injectables manufacturing plant** that targets the local market for import substitution
- A medium-sized facility **with run-rate revenues of USD 47-50 Mn** can be set up in a special economic zone, covering **~7-8% of the total import size for injectables**
- Local banks can finance up to 70% of the project, resulting in c.a. **USD 15M in required equity investment and 20%+ IRR** over a 30-year operating horizon

Pakistan: Your Pharma Destination

Pakistan Value Proposition

Reformed Economy

USD 3.3Tn[1] Expected GDP in 2050 *(from USD >410Bn[2] today)*	**B-** Improved Credit Rating[3] from CCC-	**Top 10** In Business Entry Regulations ranking[5]	**Stabilized Inflation** At lowest levels since 1968[6]	**Stabilized Currency** Achieved since 2023 in coordination with IMF	**Special Economic Zones (SZEs)** Robust fiscal and trade incentive packages[7]

Vibrant Demographics and Talent

255 million Large and growing population[8]	**64%** Population younger than 30[8]	**7th largest** Global workforce[9]	**2 million** University students enrolled every year[10]

Advanced Pharma Ecosystem[11]

USD 4.4Bn *(USD 6.7Bn expected by 2030)* Pharmaceuticals market size in Pakistan	**650+ manufacturers / 10+ multinationals** Operating in Pakistan	**100+ thousand** People employed in the pharma sector	**100% YoY Growth** In Pharma exports	**70% local production** Of simpler chemicals (oral solids/liquids), setting strong foundation

1. Goldman Sachs; 2. National Accounts Committee; 3 Fitch Ratings; 4. Bloomberg, 84% in PKR; 5. World Bank's B-READY assessment; 6. US (St Louis) Federal Reserve Bank; 7. Pakistan Government; 8. United Nations, SIFC; 9. CIA World Factbook; 10. Higher Education Commission; 11. Pakistan Pharma Manufacturers Association

Investors have an opportunity to develop and operate an injectables formulation and packaging plant in Pakistan

Opportunity overview and key highlights

Opportunity Description: Develop and operate a generic injectables manufacturing plant with generalist specialization and targeting local market for import substitution

High-Level Opportunity Facts

A Project Details

- Generic Injectables
- ~30 Mn Vials / Year
- International Certification (cGMP)

B Supply-Demand Gap	Significant reliance on imports of generic injectables (imports USD ~2Bn between 2022-2024)
C Investment Model	Private sector investment with strong government support
Return Profile[1]	IRR: 20-22%
D Run-rate Revenues[2]	USD 47-50Mn
Estimated Project Cost	USD 50Mn (USD 15Mn equity)

1. In local currency; over 30 years of operations; assumes 70% financing (detailed in Business Case section); 2. Estimated revenues in year 10
Source: Expert input, DRAP, Pharma Manufacturers Association

Value Proposition

Advanced Existing Formulation Presence

Focus of this opportunity

API → Formulation → Primary packaging → Secondary packaging

650+ local formulators and packagers with established capabilities in oral solids and liquids, reflecting a strong foundation in pharmaceutical formulation

Established Client Base: Diverse local demand of injectables from hospitals, gov. agencies, pharmacies and retail distributors

Skilled Technical Talent: Large talent pool of 100,000+ pharma professionals

Strong Government Backing: Robust policies and incentives enhance project viability

A. The plant will manufacture generic injectables with generalist production capabilities, targeting both private and public sector end-users

Project details

Offering

- Generic production capabilities (i.e., plant equipped to manufacture multiple types of injectable products across different formats (e.g., vials, syringes)
- Initial target of therapeutic areas with high imports:
    - Anti-infectives for systemic use
    - Nervous system

Technical Specifications

- Capacity: ~30Mn vials per year
- International cGMP certification enabling potential export activity

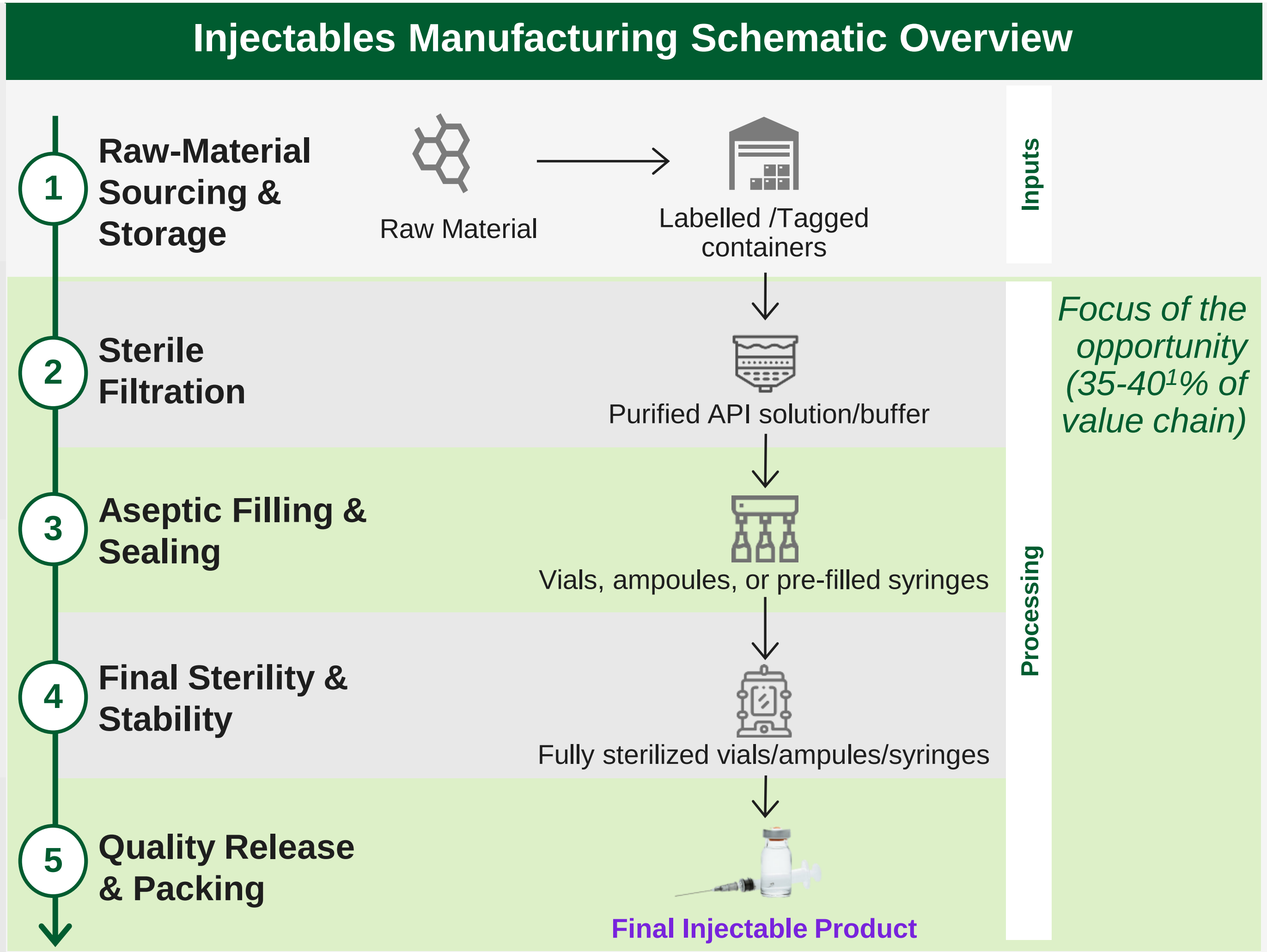
Targeted End-Users

- Hospitals and government agencies procure injectables for clinical use and immunization campaigns
- Pharmacies and retail distributors for prescription-based injectables (e.g., hormonal treatments, anti-inflammatory drugs)

Location

- In close proximity to current formulation and packaging ecosystems: Punjab, KPK, Sindh, Islamabad
- Targeted special economic zones

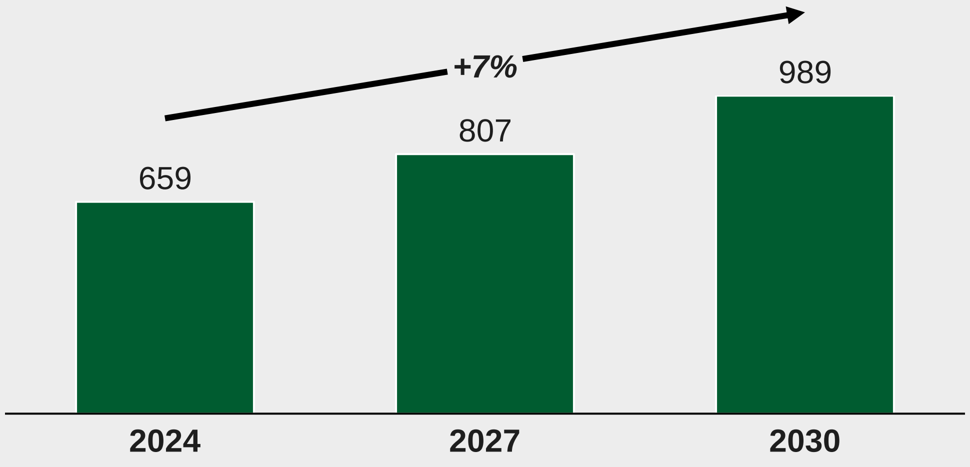
1. Industry expert estimation; includes gross margin



B. The opportunity aims to leverage Pakistan's growing Pharma market and the Government's support to reduce import reliance for injectables

Injectables Demand Tailwinds

Injectables Imports in Pakistan (USD Mn)[1]



- USD ~2Bn of finished and formulated injectables imported between 2022-24 to satisfy local demand
- ~35% of imported injectables are patented products, limiting their potential for immediate localization due to intellectual property restrictions
- Local injectable production remains minimal, with the vast majority of domestic demand met through imports

Demand Drivers

Large Market	– Growing Demand: Pharma market to reach **USD 6.7Bn by 2030**, driven by rising medicine consumption among **240+ million people** – Immediate Opportunity: **USD ~2Bn of finished and formulated injectables** imported between **2022-24** to satisfy local demand
Increased Reliance on Injectables	– Global Injectables Upside: The global **market of injectables** is **projected to double** from ~\$95B in 2023 to ~\$206B by 2030 at 11.7% CAGR[3] – Therapeutic Shift: **Rising use of injectables** for cancer, autoimmune, and chronic diseases like rheumatoid arthritis and multiple sclerosis is fueling global demand
Global Trends	– Growing Generics Market: ~USD **380Bn drugs off-patent by 2025[2]**, increasing generics demand, expanding the pool of generic injectables (target of this opportunity) – Global Supply Chain Shift: Rising protectionism pushing **pharma reshoring**; Pakistan positioned as a regional hub connecting Middle East and Asia

1. Import estimates are based on the following assumptions: injectable import volumes from the past three years were averaged to represent 2024 (to smooth out year-on-year fluctuations), and overall pharma market growth rate applied (7%); 2. US National Library of Medicine; 3. Business Wire
Source: Fitch, NIH, expert input, desktop research

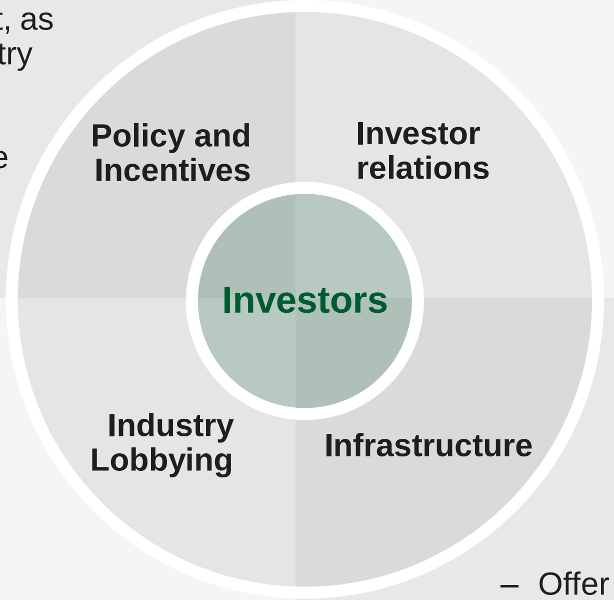
C. Investors will be supported by public and private parties in a robust Pharma ecosystem

Drug Regulatory Authority of Pakistan (DRAP / MNHRC)

- Responsible for policy framework and incentives through the DRAP Act and the Drugs Act
- Provide guidelines for licensing, registration, GMP, pharmacovigilance, and market surveillance
- Offers regulatory and technical support, as well as capability-building for the industry
- Supports investors in accelerated licensing and fast-tracked approvals to facilitate the establishment of injectable manufacturing facilities

Special Investment Facilitation Council (SIFC)

- Facilitates and fast-tracks foreign and domestic investments
- Provides a streamlined, one-window operation for investor support and coordination across government entities
- Hosted in Prime Minister’s Office



Pakistan Pharma Manufacturers Association (PPMA)

- Represents pharma sector interests
- Focuses on improving industry competitiveness locally and abroad
- Promotes domestic manufacturing of Injectables

Special Economic Zones

- Offer fiscal and trade benefits
- Ensure robust infrastructure (e.g., electricity stability)

C. Investors will benefit from the Government support to create an attractive business and regulatory environment

Key opportunity enablers and incentives

Ease of Doing Business

- Market prices on majority of products (only WHO essentials are regulated)
- Ongoing review and simplification / deregulation across sectors

Expedited Approval Process

- Fast-tracked regulatory approvals for essential injectables, streamlining market entry for key injectable products

Tax & Fiscal Incentives

- Tax breaks
- Reduced import duties on injectable required machinery, APIs and other raw materials (sales tax reduction to 1% and 0% customs duties on select input materials and machinery)

Infrastructure Incentives

- Special Economic Zones
  - Guaranteed electricity stability
  - Industrial infrastructure / land incentives
  - *(Planned) Pharma Economic Zone*

Source: DRAP, SIFC, P3A, other Pakistan Government entities

D. Consequently, investors can expect 20-22% IRR over the coming 30 years, with USD 50Mn in estimated CAPEX and 70% financing

Estimated project financials and investment case

(Figures provided are estimations based on available information)

Business Case			
Return profile	**Expected IRR**	**20-22%**[1]	– 2-year development period – Computed based on 30-year operations; assumes contracts indexed to USD – Payback period impacted by development period and cash outflows for interest in first 10 years of operations
	Payback Period	**c.a. 7 years**[2]	
Operations	**Revenues**[3]	**USD 47-50Mn**	– Initial capacity utilization of 40%, ramping up to 90% over 5 years of operations – Assumes a plant capacity of 30Mn vials per year and an average price of USD 1.5 per vial based on industry experts – 4 production lines operating for ~25 days per month
	EBITDA Margin[3]	**33-35%**	– Costs assumed: overhead / conversion costs (e.g., utilities, manpower, testing), material costs ,all based on expert input
	NOPAT[3,4]	**USD 11-12Mn**	
Development	**Construction Cost**[5]	**USD 50Mn**	– ~USD 12-14Mn CAPEX per manufacturing line based on expert input (4 lines at initial set-yp) – 70% financing of construction – 12-year loan duration (including 2 years grace period), 13% interest (based on offered local bank financing terms)
	Equity Input	**USD 15Mn**	– 30% equity required for development

1. Computed on 30-year operating period; assumes 4.5x revenue multiple terminal value; 2. Payback period excludes development lead time
3. Run-rate figures after demand stabilization (year 6 of operations / year 8 of contract); 4. NOPAT computed as EBIT * (1-Tax); corporate tax rate of 29% applied
5. Estimated construction cost based on expert input and industry benchmarks

D. Support mechanisms are in place to support the mitigation of potential risks impacting the investment case

Key investment risks and mitigation measures

Risk type	Description	Degree of Risk	Investor Mitigation Actions	Public Sector Support
Demand/ Revenue	Risk of not achieving projected revenues or sales targets due to lower demand or competitive pressure	**Low** – Significant local supply imbalance in Pakistan given limited local injectable production capabilities; limited local competition	Focus go-to-market on securing contracts with retail and public health entities to ensure demand	Support demand through strong enforcement of regulatory requirements (i.e., localization requirements)
Macroeconomic Conditions	Risk of inflation or currency depreciation affecting profitability	**Medium** – Recent track record of inflation decline (at lowest levels since 1968[1]) pointing to stabilization	Arrange local currency financing for the project	Facilitate access to local currency loans
Supply Chain Risks	High reliance on imported raw materials and inefficient port handling can delay deliveries	**Low** – Pharmaceutical supply chain routes, especially with China and India, are well established given the magnitude of current imports and the size of the industry	Diversify suppliers and build contingency inventory levels of essential raw materials	Ensure fast customs pass-through to avoid spoiled materials; Expand regional trade agreements
Unreliable and Costly Electricity	Unreliable and elevated electricity tariffs affecting investment profitability	**Low** – Electricity prices in Pakistan are above regional ones; however, the government is engaged in several infrastructure projects aimed at power supply stabilization, which helps bring cost down	Explore renewable energy integration to offset grid consumption on the long term	Provide more cost-effective electricity industrial tariffs to ensure investment attractiveness
Regulatory / Legal	Risk of sudden policy changes impacting contract or taxes	**Low** – Recent reforms and deregulation trend suggesting commitment to private sector partnerships	Include independent jurisdiction (e.g., UK) in contract; include robust stabilization and early termination clauses in concession contract	Offer legal protections and enable international arbitration where applicable

1. St. Louis Federal Reserve Bank

Connect with SIFC to learn more

Website

https://sifc.gov.pk/

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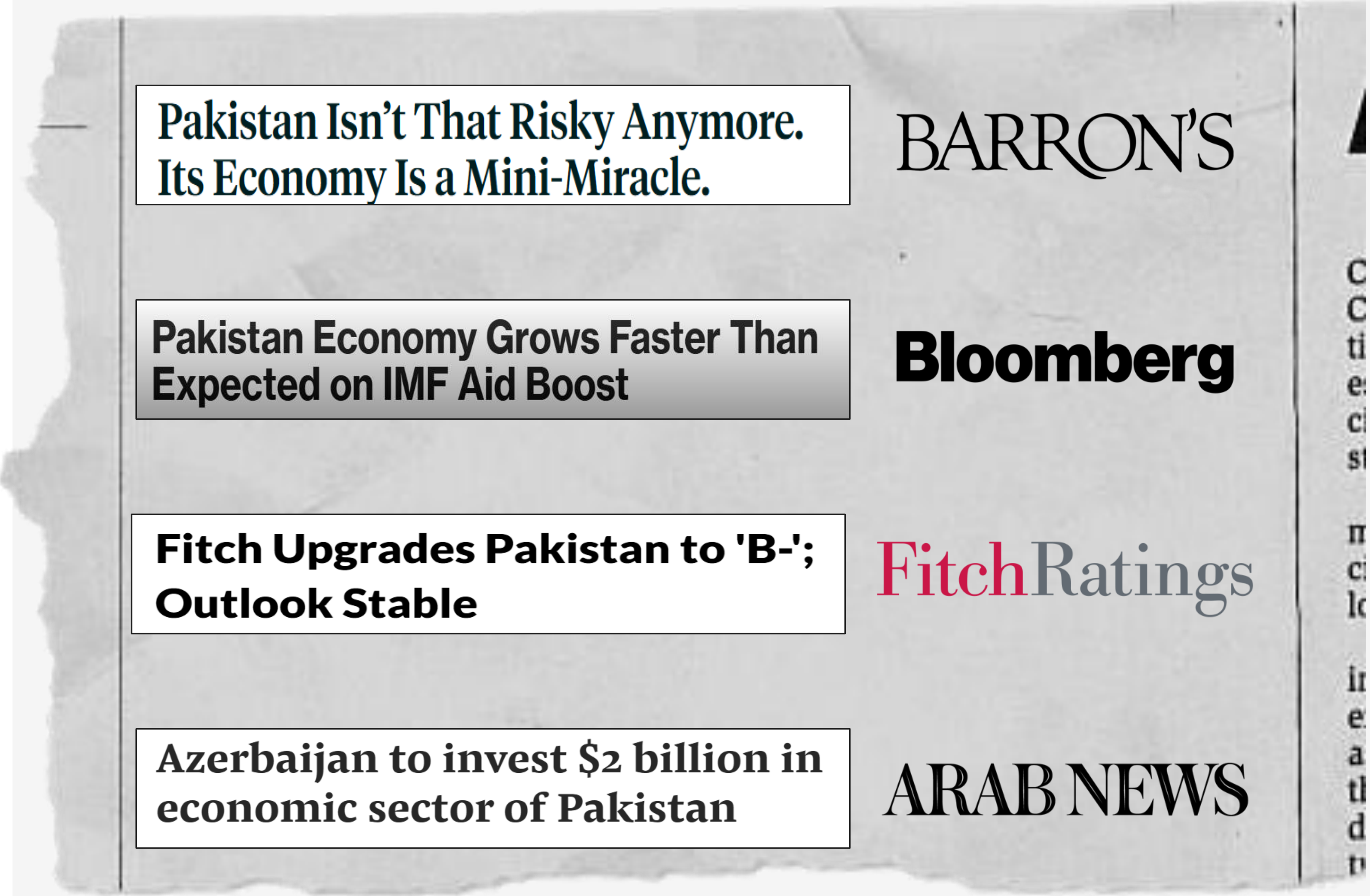
APPENDIX

A. Pakistan has reemerged as an investment destination thanks to macroeconomic stability

Pakistan's Economic Turnaround in the News



Pakistan Isn't That Risky Anymore. Its Economy Is a Mini-Miracle.

BARRON'S

Pakistan Economy Grows Faster Than Expected on IMF Aid Boost

Bloomberg

Fitch Upgrades Pakistan to 'B-'; Outlook Stable

FitchRatings

Azerbaijan to invest $2 billion in economic sector of Pakistan

ARAB NEWS

A. Pakistan has a track record of successful Foreign Direct Investments across sectors

Examples of Foreign Direct Investment (FDI) projects in Pakistan

FDI projects (non-exhaustive)

Hangzhou Newsea (China)
USD 50-70Mn

- Joint venture (ETACI Limited) to expand API manufacturing capacity in Pakistan
- USD 50–70Mn investment to add 20–30 new APIs, leveraging Citi Pharma's existing infrastructure; commercial operations expected within 12–18 months

AD Ports (UAE)
USD 220Mn

- 50 year concession agreement to manage, operate and develop the Karachi Gateway Terminal
- USD 200Mn investment in infrastructure development by AD Ports in first 10 years

Al Mirqab Capital (Qatar)
Power Construction Corp. (China) USD 2.09Bn

- Construction of coal-powered power plant in Port Qasim, under build-own-operate (BOO) model
- USD 2.09Bn investment, of which c.a. USD 500Mn in equity

DP World (UAE) and **National Logistics Corp.** (Pakistan) JV investment not public

- Joint venture (DP World: 60%) focused on road freight logistics approved
- Follows MoU by DP World for the development of 50km freight corridor from Karachi Port to Pripri

Air Arabia (UAE) and **Lakson Group** (Pakistan)
JV investment not public

- Air Arabia enters joint venture with Pakistan's Lakson Group to launch low-cost airline Fly Jinnah in 2022
- Operator certificate and license acquired

Other Announcements and MoUs (non-exhaustive)

- Reportage Properties (UAE): JV with Empire Holding Pakistan for USD 300Mn real estate development in Islamabad and Lahore
- Emaar Group (UAE): JV with Giga Group Pakistan for USD 2.4Bn Crescent Bay real estate
- Saudi Development Fund (KSA): Potential investment in mining infrastructure (USD 100Mn)
- Manara Minerals (KSA): Exploring stake in Reko Diq copper and gold mine (USD 7Bn)

Source: Press releases; Pakistan Press Information Department; international media

B. Top Imported Injectables in Pakistan

Top 10 Injectables Imports (2022-2024)		
Active Molecule	**WHO EML List?**	**ATC Level 1**
Iron sucrose	No	Blood and Blood Forming Organs
Meropenem	No	Antiinfectives for Systemic Use
Drotaverine Hydrochloride	No	Alimentary Tract and Metabolism
Lincomycin	No	Antiinfectives for Systemic Use
Ceftriaxone	Yes	Antiinfectives for Systemic Use
Meropenem trihydrate	No	Antiinfectives for Systemic Use
Propofol	Yes	Nervous System
Metronidazole	No	Antiinfectives for Systemic Use
Sodium Chloride	Yes	Blood and Blood Forming Organs
2-methyl-2-phenoxypropionic acid	No	Alimentary Tract and Metabolism

Additional opportunities:

– Injectable grade active pharmaceutical ingredients (APIs)

– Finished products covering Oncology, Hormonal treatments, Analgesics and anesthetics, anti-inflammatory agents, monoclonal antibodies, and vaccines.

Source: DRAP

D. Opportunity P&L

Extract from financial model

Preliminary numbers being validated; figures provided are estimations based on available information

Numbers in USD[1]

	Year 1[2]	Year 5[2]	Year 10[2]
Utilization	40%	80%	90%
Estimated Market Capture	2%	4%	3%
Total Revenue	**19,101,744**	**41,352,684**	**51,363,793**
Cost of Operations			
Utilities & Marketing costs	5,730,523	12,405,805	15,409,138
Material cost	6,685,610	14,473,439	17,977,327
Total OPEX	**12,416,134**	**26,879,245**	**33,386,465**
EBITDA	**6,685,610**	**14,473,439**	**17,977,327**
EBITDA Margin	*35%*	*35%*	*35%*
NOPAT	**3,681,783**	**9,333,305**	**11,954,256**
Financing			
Interest	5,760,486	4,239,154	936,836
Debt Outstanding	42,187,318	28,881,851	- 0.00

- Revenue calculation is based assuming a manufacturing capacity of 25,000 vials per line per day, an initial average price per vial of USD 1.5 and an annual USD price increase of 2%

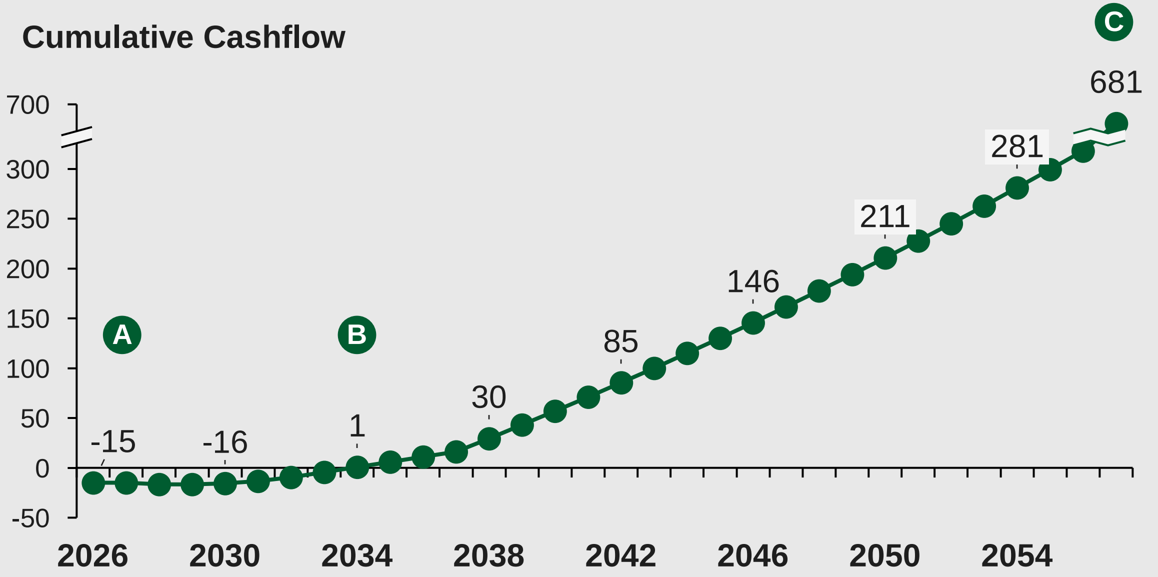
- Expert input / industry reports
- Public comparables (e.g.,: AUROPHARMA, GLAND, HIK)
- Other desktop research and benchmarking

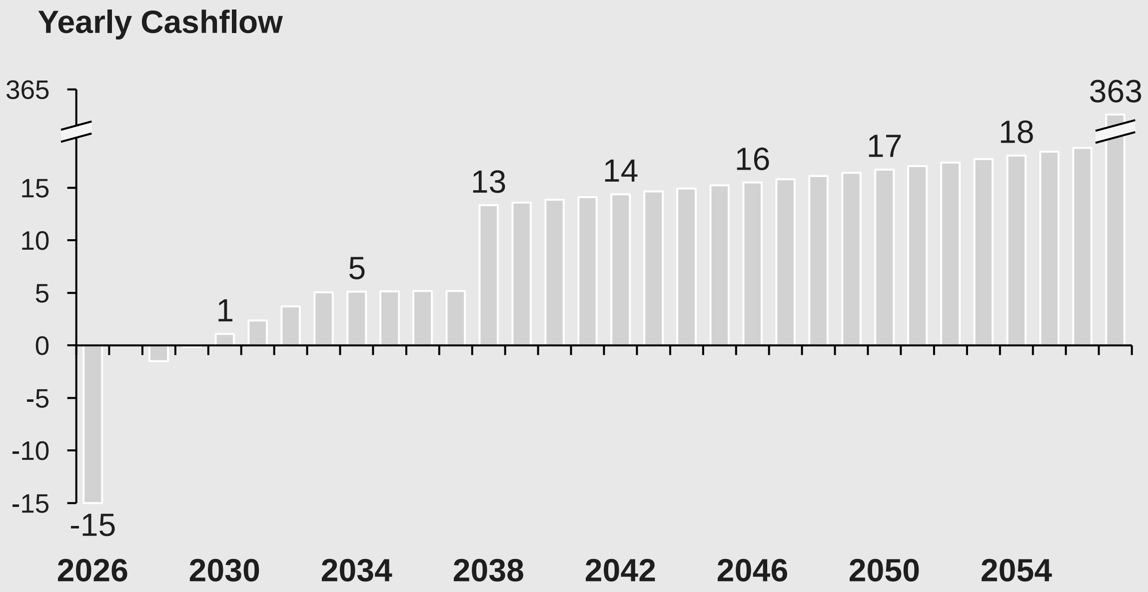
- Project coverage, loan duration and interest rate provided by local bank
- Debt in Year 1 includes additional interest accrued by not paid during development

1. Assumes constant currency exchange
2. Operating years, after 2-year development period (i.e., contract years 3, 7, 12)

D. Investor Cash Flows

Investor cash flows, USD Mn





Investor cash flows:

- Upfront equity investment: USD 15Mn
- Cumulative cash flows over the duration of the investment: USD 681 Mn (including terminal value)

Additional information:

A Development period: 2 years

B Payback period: year 7 of operations

C Terminal value: USD 343Mn; computed as 4.5x revenue multiple

D. P&L Assumptions

Extract from financial model

Preliminary numbers being validated; figures provided are estimations based on available information

Revenue Assumptions		
Assumption	**Unit**	**Value**
Average Injectable Price (Vial)	**USD/ vial**	**1.5**
Manufacturing Plant Capacity	**Vials/ year**	**30,000,000**
Initial Utilization	**%**	**40%**
Incremental Utilization	**%**	**10%**
Final Utilization	**%**	**90%**
Inflation	**%**	**2%**

OPEX Assumptions		
Assumption	**Unit**	**Value**
Utilities & Marketing costs	**% of Revenue**	**30%**
Material costs (including packaging)	**% of Revenue**	**35%**

Source: Expert input, Fitch, DRAP, Company Benchmarks

D. CAPEX assumptions

Extract from financial model

Preliminary numbers being validated; figures provided are estimations based on available information

Total Project Cost			
Assumption		Unit	Value
Blended CAPEX per manufacturing line		USD CAPEX/ line	12,500,000
Production lines		Lines	4
Total CAPEX		USD	50,000,000
Total CAPEX Breakdown	Construction and Civil Works	%	20%
	Utilities and Process Equipment	%	35%
	Laboratory Equipment	%	10%
	Process and Laboratory Equipment Validation	%	10%
	Construction Overheads	%	25%

Source: Expert input, regional and global project examples

Thank You