

# Operational Strategy in the Musical Instruments Industry: A Case Study of Yamaha

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**Abstract.** The global musical instrument market has experienced an upturn and downturn during the pandemic, with high channel inventories and uneven recovery. Demand recovery is asymmetric across regions and product lines, prolonging dealer destocking and widening supply–demand cadence mismatches. This paper takes the listed company Yamaha as an example, based on recent financial reports and management statements, to sort out the business structure and analyze around three topics: "inventory rhythm", "demographic structure", and "digital ecosystem". The results show that the musical instrument sector is held back by inventory reduction, while B2B audio and exchange rates offset nominal revenue. "Make-to-order" and "small-batch quick return" can improve turnover, and "30-60-90-day" milestones and community activities can enhance retention and upgrades. One-click course export to creation/stage presets can reduce cross-platform friction. This paper provides an actionable roadmap for listed companies, offering guidance for manufacturers and investors on strategic choices and stock price focus in the post-pandemic stage.

**Keywords:** Yamaha, Inventory management, Omni-channel, Digital ecosystem.

## 1. Introduction

The global musical instrument and audio industry has shown a trajectory of "sharp upswing, fallback and rebalancing" before and after the pandemic. Home-based learning and entertainment significantly increased the entry and replacement demand in the short term, and the channels quickly stocked up. Then, with the recovery of offline activities, macro consumption tended to be cautious, and inventory was high, the demand gradually returned to normal, and the production and marketing organization entered the re-matching stage. As a company listed on the main board of the Tokyo Stock Exchange, Yamaha has a complete product spectrum and global supply chain in the two major sectors of Musical Instruments and audio. Quarterly materials and management Q&A can continuously provide comparable caliber, which is suitable for comprehensive analysis from three dimensions of business strategy, financial rhythm and capital market expectations [1-3].

Supply chain research shows that demand information is easily amplified in multi-level channels, resulting in "bullwhip effect", which leads to planning deviation, inventory accumulation and service level fluctuation. In an uncertain environment, it is suggested to reduce the transmission and amplification of fluctuations through transparent data, collaborative replenishment and rapid response of small batches [4]. Retail research points out that channels are moving from multi-channel to omni-channel, and consistent experience and data connection across touch points are the key to improve conversion and repurchase, which is particularly important for durable goods containing "hardware-content-service" [5]. Novice music education and participation, according to a study in the early stages of the turnover rate is higher, continuous motivation, phased achievements and social support network plays a decisive role in retained [6-8]; Online or blended teaching can improve accessibility, but if it is disconnected from physical experience, it is not conducive to medium and long term stickability [9]. In addition, active music participation of the elderly group is positively correlated with health and well-being, suggesting that market expansion for adults and "silver haired" people has both social and commercial value [10].

This paper takes Yamaha as a case, combines the company's external disclosure and related research, and starts from "case description - problem analysis - countermeasures and suggestions". The research focuses on three core propositions: first, supply beat management under channel

destocking and demand rebalancing in the post-epidemic stage; Second, the shift of population structure and the upward shift of value after the weakening of the growth logic led by children's education; Third, digital ecological breakpoint and localization path in the learning-creation-output chain. The significance of this study is to provide an industry analysis paradigm for listed companies, which can not only explain the resonance mechanism of short-term operation and stock price, but also provide a basis for medium- and long-term strategy selection.

## **2. Case Description**

### **2.1. Company Development and Business Overview**

Yamaha has formed a product matrix covering piano, digital piano, guitar, bass, percussion, orchestral music and professional/home audio. The R&D - manufacturing - channel - after-sales system is distributed in multiple regions around the world, which can support the differentiated needs of different markets [1]. From the perspective of investor materials, the company discloses "Musical Instruments" and "audio equipment" as core segments, corresponding to ToC and ToB business structure respectively: the former is deeply affected by residents' consumption cycle, education expenditure and cultural preference, while the latter is more driven by project cycle, engineering construction and budget rhythm, with relatively strong resilience [1]. As a listed company, the quarterly disclosure of Yamaha revenue, profits and sector performance, and is given in the results indicated the boom of market capacity and inventory, exchange rate, the key variables such as diameter, beat for the analysis of management and strategy placement provides a continuous sample [2].

### **2.2. Operating Status and Key Signals**

In the past two fiscal years, the company has continued to emphasize in its performance presentations: the musical instrument sector has been under pressure in the post-epidemic stage, digital pianos in Europe and North America have been slow to recover, and piano-related demand in China has weakened; At the same time, the performance of B2B audio business is relatively stable, and the weakening yen provides a certain basis for nominal revenue [1,2] . In the Q&A and press release, the management further mentioned the high channel inventory and the new normal demand in the Chinese market and accordingly promoted the optimization and structural reform of the piano production system, showing the idea of "destocking - adjusting capacity - stabilizing order" [3]. Based on these public signals, it can be judged that the company is in the repair period with quality and efficiency as the priority: on the one hand, it should reduce the mismatch by focusing on the main models with high turnover and production by sales; On the other hand, to stabilize cash flow with engineering audio and system solutions, combined with exchange rate factors to buffer the fluctuation of the main musical instrument industry [1-3] .

### **2.3. Summary and Transition**

Based on the disclosure materials, three main lines can be summarized. First, supply beat dislocation caused by demand decline and channel destocking is still the main contradiction at the current stage, and it is necessary to reconstruct beat coordination from three levels of planning, production and distribution [1,2]. Second, the marginal weakening of the growth model driven by over-reliance on children's education, it is necessary to redefine the value proposition and service system for adults/advanced and "silver" groups and realize the rebalance of population structure [8,10]. Thirdly, the learning-creation-output cross-scene experience has not been fully opened, and there is friction between digital resources and offline experience, which affects the natural transformation from entry to upgrading [5,9]. These three main lines provide the direction for subsequent problem analysis and strategy suggestions.

### 3. Analysis of the Issues

#### 3.1. Inventory Beat Misalignment and Turnover Pressure

In the post-epidemic stage, the channel experienced a cycle of "stocking up - moving sales less than - destocking". The terminal gave priority to the existing inventory, new products were passively admitted, and the matching degree between production plan and distribution orders decreased. The combination of "pressure on musical instrument plate -- audio and exchange rate hedging" in the company's caliber reflects the structural difference between the main business and hedging items [1,2]. From the perspective of mechanism, in the face of uncertain demand, the multi-level channel is easy to produce amplified order fluctuations due to the superposition of safety inventory and experience judgment, and the upstream capacity and material plan further deviates from the real rhythm of the terminal, forming the bullwhip effect [4]. Its consequences are mainly as follows: pushing the SKU complexity in system and finished goods inventory, warehousing and logistics costs, cash flow cycle extended; At the same time, the distribution tends to place conservative orders under the background of inventory shortage, which leads to constraints on the promotion of new products and the price system. If the beat reconstruction is not carried out by the digital mechanism of "fixed production by sales - rolling replenishment - quick return in small batches", periodic mismatch will occur repeatedly and erode profits [4].

#### 3.2. Crowd Structure Shift and Value Upward Shift Bottleneck

Changes in the macro and institutional environment have weakened the stability of the single drive of "children's piano". With the adjustment of population structure and family education expenditure structure, the focus of growth needs to shift to adults, advanced and "silver" groups. Studies have shown that the turnover rate of beginners is high in the first few weeks and months, and the lack of phased achievement and peer support is the main reason. If online courses are disconnected from offline practice, it is difficult to form coherence [6-9]. In key markets such as China, the traditional logic of "grade exam-advance" is weakened, and interest and social attributes are more important. At the same time, the "silver hair" group has the characteristics of abundant time and health orientation, and active music participation can enhance happiness and improve social connection [10]. However, the realization of value upward is not only based on product pricing but needs to build a clear path of "learning objects-work production-display stage-community relations-equipment upgrade" around different groups. Without visible stage achievements and visible scenes, repurchase and upgrade will be difficult to occur.

#### 3.3. Digital Ecological Breakpoint and Insufficient Localization

Yamaha has both musical instrument and audio ecology, and has the potential to connect learning, creation and live output. However, in actual use, there may still be interface friction between the course content of the teaching platform, the workflow of the creation software, and the sound color and sound amplification of the hardware equipment: how to transfer the materials in the learning stage to the creation software with one click? How can the timbre of home recording be easily mapped to stage sound reinforcement? How can the store enable users to complete the closed-loop experience from "learning-recording-performing" in a short time? From the perspective of all channels, failure to connect data and content leads to contact point breakage, and users need to manually migrate across multiple platforms and devices, resulting in high experience costs and prolonged transformation chain [5]. At the localization level, if there is no content and activities matching the local music library, traditional style and regional community, it is difficult for online interest to be deposited into offline participation and equipment upgrading, and the potential advantages of ecological collaboration cannot be fully released [5,9].

## 4. Strategies

### 4.1. Supply Beat Optimization: Fixed Production by Sales and Quick Return in Small Batches

First, the long tail SKUs should be converged, focusing on the main configuration with high turnover and the hot selling color all year round, establishing the three-level structure of "core-season-test", clarifying the ordering and replenishment rules at different levels, and reducing the channel complexity and price interference [1,2]. Second, establish a high-frequency collaborative replenishment mechanism in core distribution and key cities, calibrate the sales forecast and replenishment quota on a weekly basis, and form a rhythm of "how much to sell, how much to replenish, and fast turnover" by combining the dynamics of safety inventory and delivery time; For cities with slow turnover, "quota + pull" is implemented in parallel to avoid rigid pressure [4]. Third, for reproduction and special color matching, small batch pre-sale and limited release are adopted, and the demand is verified by the intensity of interest first, and then the production expansion is decided; For high-priced new products, combine appointment-based trials with in-store "experience weeks" to mitigate inventory risk arising from demand misestimation [4]. Fourthly, historical inventory and B products—units with minor cosmetic defects or inspected returns that remain fully functional—should be handled hierarchically, cleared by official outlets and authorized channels in a unified manner, display and pricing strategies should be separated, and brand equity and user experience should be protected by warranty terms and transparent labeling.

### 4.2. Retention and Upgrade Path: Goal-driven and Scenario-oriented Operation

First, the milestone design of "30-60-90 days" is introduced in the entry stage: measurable achievements are set in each stage (such as completing two complete tracks or an ensemble), which are combined with course clearance, certificates and small demonstration activities to form immediate feedback and power to be seen [6,8]. Second, the advanced stage to upgrade Suggestions through curriculum system and equipment, with the three elements of "voice - touch - service" constitute the value of narrative: for example, by the official tone, standardized recording template and store calibration services, help users from the primary device in the natural transition to high-end equipment [7,8]. Thirdly, adults and "silver hair" groups take community ensembles and small stages as the core carriers: small ensembles and "open mic" are held regularly in communities, stores and urban public Spaces, combining health and social themes to improve the frequency and retention of participation; At the level of purchase and service, the combination of rent and purchase, trade-in and family linkage rights are provided to reduce the threshold of one-time investment [10]. Fourth, the packaging scheme of "equipment + course + stage support" should be implemented in schools, associations and training institutions, and nodes with existing community foundation should be preferentially covered to improve customer acquisition efficiency and repeat purchase.

### 4.3. Digital Linkage and Localization: from Learning to Production and then to Stage

First, in the teaching to provide a key export project template and official accompaniment/sound library, the demonstration course material can be directly in the software to open, reduce the cost of cross-platform migration, realization of "learning - output" seamless [5,9]. Second, it provides a mapping guide from "project to scene" for home recording and small stage: it presets scene-oriented sound color, gain and effect chain, and realizes rapid restoration in the store to help users put the "sound heard at home" on the stage as consistent as possible. Third, the construction of "course, stores, small stage" closed loop: online completion of milestones, offline periodic display and ensemble activity, stores to provide on-site support and upgrade equipment suggestion, back into the online community activities of the image, form content assets and stimulate consumption [5]. Fourth, deepen localized content: make themed courses and sound packages based on local music libraries and traditional styles, invite local orchestras and teachers to jointly refine demonstration tracks and performance videos, form replicable urban templates, and gradually expand the coverage radius [5,9].

## 5. Conclusion

Based on the disclosure of listed companies and the related research, the Yamaha phase of the business environment and strategy choice in the outbreak were analyzed. The conclusion is that the main musical instrument industry is greatly affected by the demand decline and channel destocking, and the audio business and the exchange rate form a certain hedge; The core contradiction lies in the mismatch of supply rhythm, the shift of crowd structure and the discontinuity of digital ecology. The strategies to adapt to the above challenges include: the beat optimization of fixed production by sales and quick return by small batch; Retention and upgrading around milestones and scenario-based operations; Digital linkage and localization with project template, official tone and offline stage as the link. The common goal is to reduce complexity, shorten the turnover cycle, improve the conversion efficiency and customer lifetime value, so as to achieve more stable growth in the normal competitive environment.

The limitation of this study is that the data mainly come from public materials, and the lack of high-frequency trading and inventory ledgers by category and region can only be used for mechanistic inference. Future research can introduce POS data and online learning behavior data to build a tracking sample of "learning-buy-use-display" and compare it with listed companies in the same industry to test the marginal contribution of "beat optimism-retention update-digital linkage" path to revenue quality and cash turnover.

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