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Financial Innovations Lab Report



Financial Innovations for Developing Archaeological Discovery and Conservation

FINANCIAL INNOVATIONS LAB REPORT



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Financial Innovations Labs bring together researchers, policy makers, and business, financial, and professional practitioners for a series of meetings to create market-based solutions to business and public policy challenges. Using real and simulated case studies, Lab participants consider and design alternative capital structures and then apply appropriate financial technologies to them.

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The Milken Institute is an independent economic think tank whose mission is to improve the lives and economic conditions of diverse populations in the United States and around the world by helping business and public policy leaders identify and implement innovative ideas for creating broad-based prosperity. We put research to work with the goal of revitalizing regions and finding new ways to generate capital for people with original ideas.

We do this by focusing on *human* capital—the talent, knowledge, and experience of people and their value to organizations, economies, and society; *financial* capital—innovations that allocate financial resources efficiently, especially to those who ordinarily would not have access to such resources, but who can best use them to build companies, create jobs, and solve long-standing social and economic problems; and *social* capital—the bonds of society, including schools, health care, cultural institutions, and government services that underlie economic advancement.

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“It is easier to study the products of a criminal and destructive trade than it is to study the trade itself or its consequences.”

Neil Brodie, Stanford Archaeology Center

INTRODUCTION

Moche textiles, Etruscan vases, Shang Dynasty bronzes, Phoenician sculptures: the demand for antiquities has contributed to the growth of a global art market estimated at \$55 billion.¹ Driving the trade of history's prized artifacts is the ability to reap both a cultural and economic return on investment. Unlike stocks and bonds, terra cotta figures and marble statuary offer the tangible cachet of both personal and portfolio showpieces.

The antiquities market has grown exponentially over the past three decades, with demand outstripping supply. An engraved Sumerian cylinder seal sold at Christie's auction house in London in 1975 would be valued at three or four times that price in today's market.² Despite recent global economic turmoil, in fact, at a recent antiquities auction at Bohnams in London, "modest pieces—some good but not outstanding, others either downright mediocre or in desperately poor condition"—amazed at least one reviewer by selling "at prices defying common sense."³ Yet even with international conventions and home-country regulatory efforts to control the trade, a flourishing \$4 billion black market in art continues to hasten the destruction of archaeological sites worldwide.⁴ A 1982 survey of Mayan ruins in Belize found that looting had already occurred in nearly three-quarters of the major ceremonial centers and more than half of lesser sites.⁵ In Mali, more than half the archaeological sites have reportedly suffered damage from unlawful excavation.⁶ Up to 90 percent of Peru's pre-Columbian artifacts may have moved from excavation sites directly to foreign markets.⁷ Looted holes scar the landscape from Cambodia to Cameroon.

The illegal market for drugs or arms involves criminal activity at every transaction stage. But the lines of legality blur in the antiquities trade, with much of the illegal trade moving within an established and respected market. A murky chain of events exists between the looter and the dealer or curator, which often makes it difficult to determine, for example, whether Incan pottery on the New York auction block was in fact stolen from a site or released from a long-held private collection.

The stakes are high and the players are many, empowered by advances in technology and ease of transport that extend the reaches of the market. In the illicit trade of antiquities, now part of arguably the world's third-largest black market,⁸ this chain of commerce connects impoverished Cambodian farmers and anonymous middlemen, skilled at document forgery and facilitating shipments, with legitimate dealers and high-powered collectors in New York or London. As investment in the global economy expands alongside the demand for cultural artifacts, it has become increasingly necessary to regulate and motivate market participation.



HOLES IN THE GROUND:
LOOTING IN UMMU, A CITY OF ANCIENT SUMER

Photo courtesy of Donny George, former director, Iraq Museum

The fluid movement—both of funds and artifacts—between the illicit and the licit markets highlights all the characteristics of opacity: high corruption levels, little regulation, few or ineffective enforcement mechanisms, little transparency in valuation and pricing, and inadequate disclosure.⁹ In economic terms, the antiquities trade represents a classic case of market failure: illegally looted archaeological assets are un-priced, existing outside established markets. Distribution may occur under unlawful, inefficient, and often destructive circumstances, inflating prices and creating increased incentives to manipulate the market. The result is a distorted economic value and proliferation of an informal trade that inhibits the growth of a healthy legal market able to support proper discovery, development, and conservation initiatives.¹⁰

To create a more formal, more effectively regulated market, it is ultimately necessary to align incentives among all levels within the value chain by promoting and rewarding appropriate and legal market participation. But how, for example, does a country like Belize, with perhaps 30,000 subsistence farmers also picking through the earth for relics,¹¹ provide alternative incentives to them? How do countries of origin, which tend to be archaeologically rich but economically underdeveloped, acquire access to capital to maintain their roles as conservators and secure their archaeological resources for appropriate public appreciation? Are countries that drive the demand capable of enforcing legal and regulatory mechanisms to reinforce the market boundaries? Are they willing to do so?

In January 2008, the Milken Institute, with organizational assistance from the University of Chicago's Center for Cultural Policy, brought together economists, representatives from museums and the archaeological community, attorneys, and antiquities dealers and collectors for a Financial Innovations Lab in Santa Monica, California. Lab participants explored market-based solutions to finance and accelerate the legal discovery and conservation of archaeological heritage, with the goal of slowing and halting the devastating effects of looting. They discussed both regulatory and economic innovations and incentives. "Open markets are more efficient than black markets," wrote Lab participant Bernard Frischer, director of the Institute for Advanced Technology in the Humanities at University of Virginia, in 2006. "Ironically, this is as true for the black marketeers themselves as for the collector."¹² The Lab examined the following alternative financing options:

Promote long-term museum and exhibit leases. The lease of individual objects, as well as entire exhibits, as seen in the recent display of King Tut artifacts touring the nation, builds bridges to cultural understanding and channels funds into home-country cultural ministries to support excavation and restoration.

Develop museum/collector partnerships to sponsor archaeological digs. Expanding on the current practice of museum- and university-sponsored excavations, institutions could partner with private collectors to pool capital and provide loans to fund excavations and the subsequent publication of findings. The source of value and subsequent repayment of the loans might take the form of a share of the excavated artifacts. If the excavations unearthed little, repayment could be made from existing excess museum inventory or items for short-term exhibition.

“We really have to think of ways of creating revenue generation at the site level, not necessarily the object level.”

*Tom Wilkening,
Massachusetts Institute
of Technology*

Create “site auctions” and partnerships. All market participants, including investors, curators, universities, collectors, and dealers, could bid on the right to fund excavations and receive a share of the artifacts. Such auctions could increase funding for site protection and community development.

Introduce archaeological development bonds.

A pool of archaeological projects could support archaeological development bonds, which might prove attractive for investment from philanthropies, governments, private investors, and public-private partnerships. The bonds would effectively realize the value of intangible cultural assets, as has been done successfully with the ecotourism industry,¹³ and with tangible assets, as in climate exchanges and other environmental markets. The revenue from object sales or leases (depending on the bond structure) could facilitate participation of the home country in site management, development, and subsequent revenues from object sales/leases, archaeotourism, and licensing.¹⁴

THE ANTIQUITIES DEBATE

The market for antiquities, both legal and illicit, has sparked a debate over who owns—and who can best preserve—cultural property. Does cultural heritage belong to the modern nation within whose borders it exists, or to the world at large? And what part should national cultural identity play in the discussion of artifacts thousands of years old? Many experts, some of whom were present at the Lab, feel that archaeological artifacts belong to the country of origin and that sales of objects should be prohibited unless the state deems such sales appropriate. Other experts, however, feel that antiquities are part of the collective global identity and “belong” to the international community. Some believe that the antiquities market should cease to exist, while others assert that the sale of artifacts can serve as a benefit to countries of origin. It is a fierce debate that has divided scholars, governments, archaeologists, museums, and collectors.

Because Financial Innovations Labs bring together participants from a wide spectrum of fields, it is essential to develop and agree on a common language. During the Lab, several economic terms were discussed at length for clarification of meaning and intent. For example, the commonly used “loan” of archaeological objects was determined to be preferable to the more accurate and economic “lease” because some might infer that the latter includes an option to purchase. However, to employ the true meaning of economic terms in general, the word “lease” will be used within this report.



CULT STATUE OF A GODDESS,
PERHAPS APHRODITE

Artist: Unknown

Date: 425 – 400 B.C.

Medium: Limestone and Parian
marble with polychromy

Size: Various

Photo courtesy of The J. Paul Getty Museum, Villa Collection, Malibu, California

We acknowledge that many in the archaeological community are reluctant to accept any proposals pertaining to the monetization and trade of archaeological assets. On both sides of the cultural property divide, including those who did not have a voice at the Lab, any economic solution that might compromise the rights and heritage of countries of origin must be scrutinized. Several options presented at the Lab, especially those involving the sale of excavated objects, are problematic under current market and policy regulations, and would necessitate a re-examination of local and national patrimony, or ownership, rights, with considerable legal and cultural implications.

The archaeological community represented at the Lab had significant reservations when discussing economic solutions that would challenge current national or international statutes. Although this was considered a major obstacle, some legal models were discussed to stimulate ideas about how regulatory policies could complement financial innovation, ensuring that possible solutions would benefit countries of origin without compromising their sovereign rights.

ISSUES & PERSPECTIVE

The acquisition of antiquities, once the concern of academics and the pleasure of a privileged few, has developed into an international industry. In recent decades, particularly, the market has exploded with the expansion of global wealth and high-tech sales mechanisms. It was only a matter of time before a buyer in San Francisco could log on to eBay and purchase a twenty-first century B.C. Sumerian cylinder seal half a world away. And while the legal antiquities trade only generates an estimated \$200 million a year, the illicit market, according to some experts, circulates billions.¹⁵

Some nations—Mexico, Peru, Turkey, Italy, and Iraq among them—had already taken steps in the late 1800s and early 1900s to establish patrimony claims and prevent the unregulated export of antiquities and other pieces of their cultural heritage. Patrimony claims may vary in detail but generally maintain that archeological discoveries belong to the state. For example, Italy’s cultural patrimony law, established in 1939, states that any object not documented to be in private hands before 1902 would be deemed property of the state and barred from export without express permission.¹⁶ It wasn’t until 1970, under the United Nations Educational Scientific and Cultural Organization (UNESCO) Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property, that the international community began to seek a common solution to the problem of illegal trade in cultural objects. Under the resulting UNESCO convention, state parties agreed to work to prevent this trade.¹⁷

At the foundation of every patrimony law is an object’s *provenience*, its actual “findspot,” and its *provenance*, or ownership history. Typically, it is difficult to prove either with certainty. No registration system is in place that captures such information. Even among renowned museums, this information is sparse. A 2000 British study of the classical objects in seven major antiquities collections revealed that “the overwhelming majority [had] no declared or credible findspots and simply surface[d] as orphans without history.”¹⁸ Nor has it proved easy to establish documentation and identification standards for integration into cross-referenced databases. Geographical mapping data and computer network systems that could close the information gaps are costly, especially for poorer countries of origin. Yet the significance of proper documentation is paramount for regulation because no object can pass through the legal antiquities market today without it.

Despite the UNESCO convention, member nations still maintain a patchwork of national laws addressing provenance, financial redress, regulations for dealers, and state ownership extended to territories. The result is considerable variation in legal principles among different nations that, at times, hinders enforcement of cross-border trade regulations.

Customs officials in countries of origin often lack the training to determine an object’s authenticity, and their counterparts in market countries are often unaware of country-specific import restrictions, according to Matthew Bogdanos, who led the international investigation into the 2003 looting of the National Museum of Iraq.¹⁹ Neither the market nor the country of origin has access to integrated data systems for tracking the sale and movement of objects. However, the success of the UNESCO convention has led to subsequent international treaties to continue the effort, including European Union regulations and the 1995 UNIDROIT Convention on Stolen or Illegally Exported Cultural Objects, another UNESCO

initiative, that addresses private laws regarding claims, as well as returns and restitution of unlawfully obtained antiquities, including those “not unlawfully excavated but unlawfully retained if the law of the State where the excavation took place considers such objects stolen.”²⁰

Countries have responded unilaterally, bilaterally, and multilaterally to the rights of nations to protect their cultural heritage, as seen in the U.S. Cultural Property Implementation Act, which recognizes the export controls of other nations pursuant to bilateral agreements. These agreements have begun to allow for repatriation of stolen and illegally exported material to countries of origin.²¹ It has been argued, however, that the same laws that protect patrimony rights actually encourage the black market trade. According to Lab participant Bernard Frischer, besides making it illegal for citizens to sell antiquities found on their lands, the laws removed the incentive that foreign collectors had a century ago to sponsor new excavations.²²

To regulate the supply and understand demand, it is necessary to explore how the legal and illicit markets intertwine at every level of the value chain.

THE FUNDING CHALLENGE: ADDRESSING EACH LEVEL WITHIN THE VALUE CHAIN

COUNTRY OF ORIGIN

The foundation of the value chain lies in the country of origin, which is often archaeologically rich but financially poor. Such countries grapple with crumbling infrastructures and national debt, and often lack the resources for archaeological excavation, security, and conservation.²³ They find it hard enough to provide employment opportunities, and area residents may derive full- or part-time incomes from selling relics illegally removed from nearby sites. Local police are unable to curb the looting, especially once it has evolved into a complex business, with skilled and knowledgeable workers willing to score a prized find at any price. The ministry of culture simply cannot control enforcement.²⁴

But economic hardship is not the sole reason people loot. Political, social, and cultural biases also influence illegal activities. Looters have reportedly used the sale of antiquities to fund the resistance movement within the Palestinian Authority,²⁵ as well as the insurgency in Iraq, said Bogdanos. Tomb looting is deeply embedded in societies around the world, from the *huaqueros* of Peru to the *tombaroli* in Italy.²⁶ Lab participants recognized, however, that financial innovations may be able to address the economic desperation at both the local and national levels, and contribute to the education of the international community to encourage appreciation of its collective cultural history.

Thus, one clear objective for the Lab was to ascertain how to monetize archaeological resources to reduce looting and enable local economic development. In this manner, the economics of “cultural property” parallels the price discovery in environmental finance, which has become integral to mitigation of pollution and environmental damage in natural resource economics.²⁷ The environmental market was able to realize the previously unpriced value of carbon emissions, enabling companies to use climate exchanges to buy and sell credits depending on the amount of pollution they produced.

Financial innovations may be able to address the economic desperation at both the local and national levels, and contribute to the education of the international community to encourage appreciation of its collective cultural history.

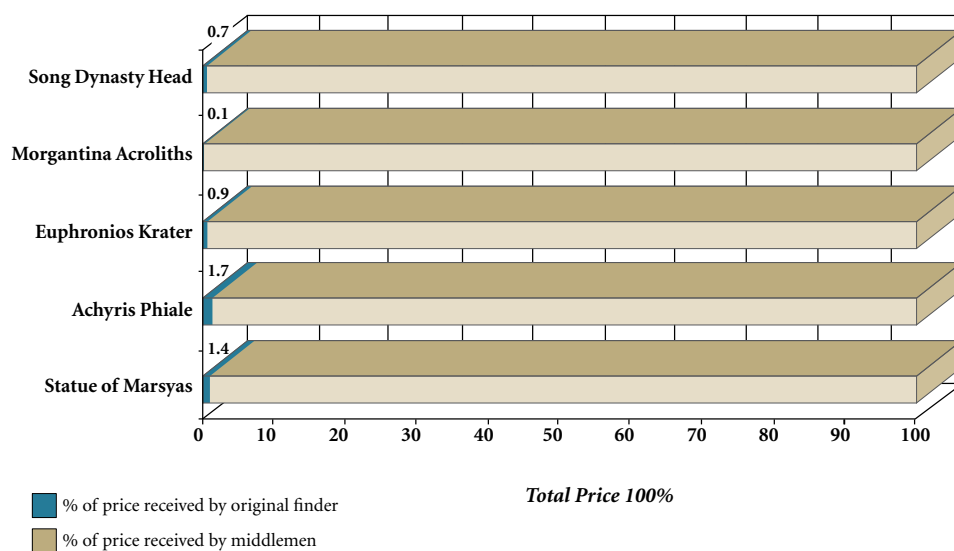
Moving past carbon sequestration, other environmental goods and services have been effectively monetized, said Glenn Yago of the Milken Institute. These include soil and biodiversity conservation, environmental risk services, and water restoration projects.

THE MIDDLEMEN

The worker who unlawfully removes a relic from the earth typically sees less than 1 percent of the final retail value of the object, as shown in figure 1. As the object moves through a series of middlemen—including local and regional buyers and sellers—on its way to market, it rises in price. Figure 1 illustrates the significant price differential of five high-profile antiquities, and how prices rose as the objects passed from the illicit to the licit markets.²⁸ The Euphronios Krater, an exceedingly rare vase dating from the sixth century B.C., is a prime example. The original seller in Italy reportedly received £8,800 for the vase in 1971. The following year, antiquities dealer Robert Hecht sold it to New York's Metropolitan Museum of Art for \$1 million. In China, a Song Dynasty head that entered the black market at \$840 was priced at \$125,000 by the U.S. dealer who ultimately offered it for sale in San Francisco.

FIGURE
1

Price gauging



Source: Neil Brodie, "Pity the Poor Middleman," *Culture Without Context*, no. 3, Autumn 1998.

That some middlemen obtain specific objects "on order" for wealthy clients also demonstrates the lax enforcement on the ground in countries of origin,²⁹ and the lengths to which looters, who are destroying sites with "bulldozers, dynamite, and pneumatic drills," will go.³⁰

Middlemen also take advantage of loopholes that exist in national laws. In Israel, for example, it is relatively easy to falsify documents. The Israeli Antiquities Authority (IAA), the agency responsible for site excavation and protection, issues licenses to antiquities dealers, who must renew their permits on

an annual basis. Every object in a registered dealer's inventory is catalogued by number, along with a brief description. A clay pot, for example, is given No. 173. A tourist who wants to buy No. 173 must receive an export license from the IAA. But few tourists know the regulation exists, and few dealers offer up this information; as a result, sales may not be properly documented. The tourist buys pot No. 173 and leaves the country, and the dealer takes another pot from inventory and assigns it No. 173. No documentation exists that the original pot was ever sold. Such weak law enforcement enables the middlemen to move objects further along the value chain.

THE SMUGGLERS/LAUNDERERS

Like the illegal drug and arms markets, the illicit antiquities market relies on smugglers and launderers who can move their objects from the country of origin to a neutral market country, i.e., one that is neutral to international treaties regulating the trade. There it is easier to introduce an unlawfully excavated urn as an “heirloom” released by third-generation heirs to a private family collection. Until its recent implementation of the UNESCO treaty in 2005, Switzerland was generally regarded as a hotbed for illegally acquired antiquities.³¹ With stronger national laws complementing its member status with UNESCO, Switzerland has reduced trafficking within its borders and become a significant example of the ability of international treaties to affect the illicit trade in antiquities.³² However, transit routes shift, and the smugglers continue to bring stolen property into market countries.

THE MARKET COUNTRY

Far from its original discovery place, the artifact next surfaces in a private or museum collection via either a dealer or auction house. Market countries are home to major research and academic institutions that conserve, restore, and exhibit the antiquities. Yet these strengths and the desire to foster cultural awareness have given rise to policies whose unintended consequences also encourage the illegal market. Even as acquisition practices tighten in the wake of recent museum purchasing scandals, other incentives, such as the tax benefits derived from donations (regardless of provenance), have obvious implications for encouraging unlawful trade.³³

Thus, as the artifact moves from the source country through the middlemen to the smugglers to the market country, it crosses borders, moves in violation of international law, and loses historical context. Lab participants examined the antiquities market to apply mechanisms and models that could monetize cultural heritage assets—not simply artifacts—and align interests among participants, creating economic and cultural returns that bring prosperity to communities around the world.

THE FINANCIAL INNOVATIONS LAB

The Lab featured three sessions in which teams of participants examined funding-gap scenarios and solutions for specific financial, legal, and regulatory challenges.

The first panel, “Defining the Problem: Exploring Each Level of the Value Chain,” gave an overview of archaeological destruction caused by looting. Panelists discussed the lack of funding necessary even to understand the size and scope of the illicit market.

The second session, “Legal and Regulatory Innovations,” evaluated the mechanisms currently in place, as well as innovations in law enforcement, such as the U.K. Portable Antiquities Scheme, a model adopted in England and Wales a decade ago that encourages the public (including amateur treasure hunters) to register their “chance finds” with local liaison officers trained to catalog descriptions and findspots into a national database. Lab participants also focused on the need for a comprehensive database, to aid in the dissemination of information and the prosecution of criminals.

The third panel, “Financial and Market-Based Innovations,” discussed financial innovations to foster archaeological discovery and conservation, reducing the demand for a black market trade. While the idea of monetizing antiquities left some participants uneasy, the idea of providing legitimate market incentives to all participants along the value chain was widely appreciated.

Over the course of the Lab, participants concluded that alternative financing ideas could possibly benefit countries of origin in their fight against looting and the illegal sale of antiquities. Of those put forward, three were the most feasible:

- Promote long-term exhibit leases for museums and exhibitions.
- Develop museum/collector partnerships to sponsor archaeological digs.
- Introduce archaeological development bonds.

Finally, Lab participants recommended additional studies to examine the actual size and scope of the market and the feasibility of local economic incentives.

THE U.K. APPROACH: PORTABLE ANTIQUITIES SCHEME

Like most nations, the United Kingdom has legislation in place to regulate the ownership of its antiquities. However, unlike most nations, the British Isles also allow only limited state ownership of any undiscovered artifacts. Because of the popularity of metal-detecting, and the abundance of antiquities, especially Roman-era coins, the Treasure Act of 1996 requires that finds be shown to the local coroner to determine whether they are valued as “treasure,” generally defined as gold and silver objects; coins over 300 years old; or prehistoric base-metal objects found after January 1, 2003. Should a find be labeled treasure, museums have the option of purchasing it at market value; otherwise, the owner may keep the piece. Anything not labeled treasure is available for sale on the legal antiquities market.³⁴

The Museums, Libraries and Archives Council began funding the Portable Antiquities Scheme in 1997. This program involves a nationwide network of individuals who work with local metal-detecting groups to register and catalog found artifacts. Before the scheme began, only about fifty finds a year were reported; that number has gone to almost seven hundred.³⁵ The database is accessible to researchers and the public.

The U.K. approach has seen relative success because of the initial ability to fund such a program and overall popular support, as well as a widespread interest in collecting antiquities. Because such conditions are not often found in countries of origin, the feasibility of a similar program has been questioned.³⁶ The scheme has also been criticized by some scholars as legalizing looting, promoting the removal of artifacts by amateurs. Proponents of the plan counter that the looting was happening already and that the scheme encourages those who have looted to at least document what was taken and from where, preserving minimal cultural context.



The bias against collectors ignores the demand that drives the trade, creating a vacuum in which billions of dollars cross through the black market.

FINANCIAL INNOVATIONS FOR DEVELOPING ARCHAEOLOGICAL DISCOVERY AND CONSERVATION

SOLUTION

1

Promote long-term museum and exhibit leases

Countries of origin have long used the practice of lending archaeological artifacts to museums around the world. The practice ensures that the culture of the Copts in fourth-century Egypt, for example, is appreciated by London schoolchildren visiting the British Museum, or that Houston ticket holders can view life-size terra cotta soldiers excavated in Xi'an.

Whether they offer an object or an entire collection, countries of origin have options when lending their cultural property: the Metropolitan Museum of Art might take a single Etruscan vase on loan for a year, while the J. Paul Getty Museum might negotiate for a collection of Peruvian featherwork to include as part of a larger exhibit. In recent decades, touring exhibitions, such as burial treasures from Mycenae and excavations from Pompeii, have generated substantial revenues. The current touring King Tut exhibit is expected to generate some \$40 million, or more than half the exhibit's gross revenue, for Egypt's Supreme Council on Antiquities to help to finance the new Grand Egyptian Museum in Cairo.³⁷ These tours, while generating capital for the companies that sponsor them, could work within lease models, with museums collaborating on the exhibition of specific collections from countries of origin to create shared revenue pools.

Other lending options could also significantly increase revenue. Museum loans are typically limited by number of years and pieces available, and Lab participants debated expanding current practices to include longer lease periods, lease renewal options, and potential extensions for additional display or travel. Lease rights could be sold at auction, allowing competition and the potential for higher prices. A long-term lease also allows for an object to appreciate in value while on display.³⁸

Participants discussed how such lease options could benefit all levels of the value chain. Local communities could see an increase in capital channeled to their economies through the ripple effects of increased tourism. Countries of origin could profit, yet they would still retain ownership rights. Ran Boytner, an archaeologist at the University of California, Los Angeles, suggested that within market countries, dealers could be paid to authenticate and negotiate lease specifics, and museums would gain access to premium archaeological pieces for display.³⁹

The lease model could be further developed with the idea of options contracts. Here, a country of origin sells an object but retains the right to buy it back at a later date at a fixed price. This model, similar to the put/call options often used in the securities market, enables the country of origin to maintain final patrimony rights while allowing the object to appreciate in value as it is displayed with accurate provenance and provenience. This could create additional opportunities for revenue flows into countries of origin, while providing a more accurate and regulated market value for all antiquities.

The discussion also addressed how to expand current museum policies to allow for longer leases and who would negotiate such contracts to ensure the most beneficial results for all parties. To fully understand the scope and magnitude of the lease option, similar discussions would have to involve insurance coverage for leased material, security and conservation of objects, and curatorial input and direction.

ACTION ITEM:

Explore international guidelines for long-term lease limits

- Establish a case study for leases as a financing model, including purchase options and potential partnerships for shared revenue (such as major traveling exhibits).

SOLUTION

2

Develop museum/collector partnerships to sponsor archaeological digs

Because museum lease models include only a few of the players within the value chain, another option would include a limited participation level for individual collectors who have spending power to generate substantial revenues. Countries of origin have been historically reluctant to lease items to personal collections. However, the bias against collectors ignores the demand that drives the trade, creating a vacuum in which billions of dollars cross through the black market.

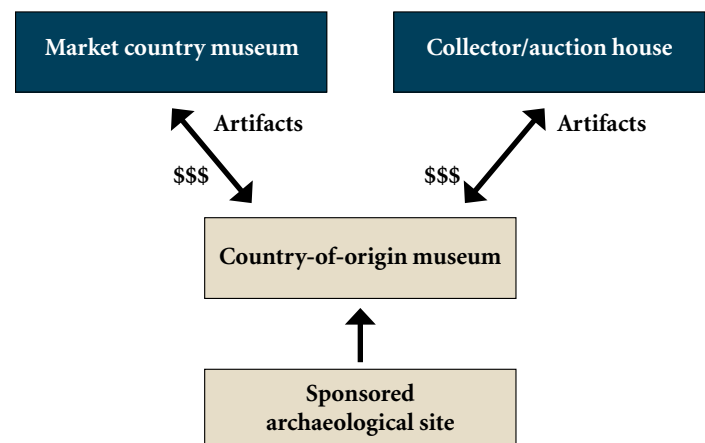
Participants discussed the viability of including collectors into a loan model without compromising patrimony laws. Expanding on the lease model, a museum in a market nation, or a private collector, could sponsor a museum in a country of origin as part of a museum partnership.⁴⁰ The local museum would conduct excavations with funding from the market participants. A portion of the yield would be distributed among all funders through either a loan or, potentially, a purchase, with the most prized and unique pieces staying in the home country. Should the dig produce nothing of salable value, the local museum would use as collateral either excess inventory from previous excavations or the loan of a currently exhibited piece.

The Getty Museum, for example, might partner with two private collectors to fund a dig in Italy. If the excavation yielded four salable objects, the value of the artifacts would be calculated, and they would be shared accordingly, either through direct ownership or of a loan. The process of sharing could also include the appraisal services of an auction house to control the pricing and distribution within the partnership model (see figure 2). If nothing were found, the Getty and the

FIGURE

2

Museum partnership model



Source: Milken Institute.

collectors would receive loans of objects already in Italian museum collections for a predetermined period. Participants discussed the viability and possible benefits of such museum partnerships. However, because sponsorship of excavations creates a greater focus on artifacts found rather than the cultural appreciation they inspire, a broader funding source was discussed.

ACTION ITEM: Explore museum partnerships

- Investigate and inventory archaeological sites that could benefit from sponsorship.
- Explore museum relationships to build on possible sponsorships.
- Design a budget within the museum exchange model to determine financial feasibility.

SITE AUCTIONS: INNOVATIVE FINANCING IN VIETNAM

Off the Hoi An coast of central Vietnam, a fifteenth-century trading ship lay deep below the South China Sea, a victim of the typhoon zone known as the Dragon Sea. In the early 1990s, fishermen trawling for red snapper and squid began to find porcelain shards in their nets.⁴¹ As news of the discovered shipwreck spread, so did the interest in its treasures. By 1995 looters were dragging steel rakes over the site.⁴² Vietnam's strict patrimony laws prohibiting the export of cultural artifacts did little to curb the destruction of the area.

The wreck was called the most important find in Vietnamese ceramics to date.⁴³ But it lay nearly 250 feet below the surface, and any salvage attempt would prove both expensive and dangerous, with sea conditions requiring crews experienced in decompression dives and advanced underwater technology. When it became clear that Vietnam's Ministry of Culture could not afford such a costly expedition, the government solicited commercial involvement.

The Vietnamese Salvage Company (VISAL), with additional support from the Malaysian salvage company Saga, began exploration of the site. Two years and \$4 million later, the 120-person crew brought up 240,000 objects, 150,000 of which were intact. All unique pieces were given to the National History Museum in Hanoi. Another 10 percent went to regional museums. Saga received 40 percent of the duplicate objects, sharing with VISAL the profits made from the auction of the remainder artifacts. In 2000 the auction house Butterfield's grossed more than \$2.8 million on just 920 of the Hoi An lots.⁴⁴ And, not too surprisingly, Butterfield's joined with eBay in the sale of the antiquities.

The initial sale involved only a small portion of the treasure, but already a substantial portion of the excavation costs was recouped, and all market players benefited from this historic compromise. Proving that national patrimony laws are not necessarily as rigid as some scholars may suggest, innovative economic solutions can be established to ensure the preservation of cultural heritage.

SOLUTION 3

Introduce archaeological development bonds

Participants also discussed how to create a sustainable source of funding for archaeological excavation and conservation, with a goal of increasing overall appreciation and understanding of cultural heritage. Archaeology development bonds (ADBs) could be one means to bridge the funding gaps that often occur within national ministries and provide a capital structure to facilitate site excavation and protection, as well as the conservation and exhibition of cultural property already in collection. The bonds could also generate significant returns for local economic development and empowerment.

In the United States and elsewhere, governments, local and regional authorities, and nonprofit organizations issue bonds to finance essential services, such as physical infrastructure. Bonds can also be made available for public-private partnerships or for private commercial and industrial development.⁴⁵ Archaeological development bonds may attract investment from philanthropies, other governments, private investors, and public-private partnerships, and result in an influx of capital to fund discovery and conservation.

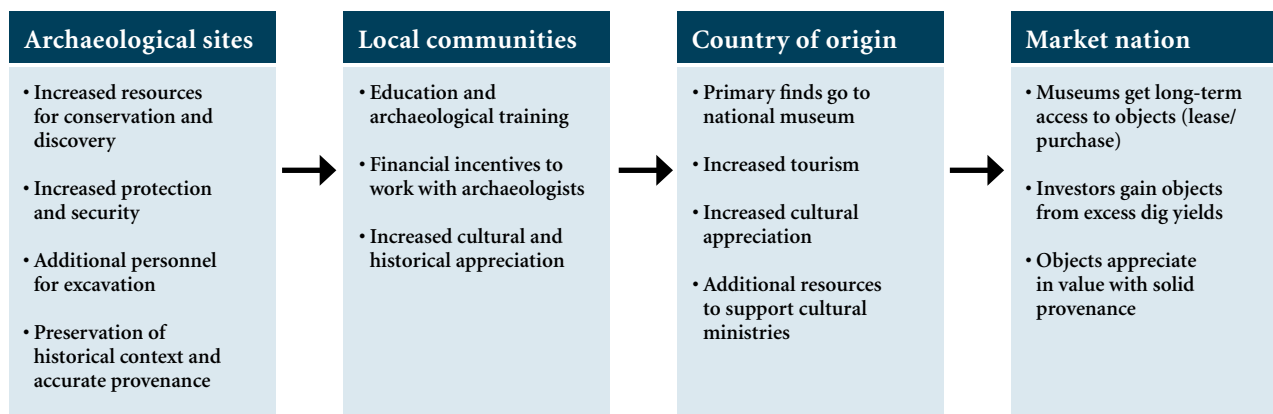
Looking at existing models of structured finance for project development, the group was encouraged to see that long-term, fixed-income bonds tied to archaeological discovery and conservation could be usefully deployed. Figure 3 illustrates how the bond revenue could fund local education, site conservation, and protection programs. It could also legitimize and regulate the legal market in antiquities as governments approved the sale and guaranteed the provenance of artifacts for export.

“Any system that you may want to create has to incentivize not just taking things out of the ground, but the actual study, conservation, and publication of the results.”

*Patty Gerstenblith,
DePaul University*

FIGURE 3

Figure 3: Archaeology development bonds could benefit every level of the value chain



Source: Milken Institute.

Like all bonds, ADBs would be long-term, interest-bearing debt instruments providing fixed returns to the investor with relatively low risk. They could be issued by private entities, such as a limited company or partnership created to mitigate risk. The funds could be raised from bond sales for qualifying projects through commercial banks in selected countries. National cultural ministries would have oversight of project selection.

An ADB would likely resemble a municipal or corporate structured finance vehicle, with collateral comprising physical assets (either archaeological discoveries or museum objects) and sharing many of the qualities of a collateralized loan obligation, a type of structured security appropriate for small-business and community development loans. It could over-collateralize the pool to provide additional security to investors.

The bonds would be traded in the secondary market, where securities previously offered could be traded again in groups or pieces to increase liquidity, broaden the investor pool, and encourage participation from sources not likely to have a current interest in cultural preservation. The financial structure could use credit enhancements in the form of guarantees to alleviate risk. In other words, foundations, museums, or other philanthropic entities would accept a lower rate of return or some other concession to absorb potential losses. Such enhancements could attract increased levels of other investment.

1 STEP

Identify the participants

The Originator

Multiple banks within a source country could serve as bond issuers. So could multilateral lending organizations, such as the European Investment Bank or the InterAmerican Development Bank's InterAmerican Investment Corporation. The originator would provide the initial capital to lend for funding the archaeological development, with repayment coming from income generated from specific projects, as well as any payment in kind (PIK) related to project completion—in this instance, interest from the loan or sale of archaeological finds, or cash isolated for repayment from revenue streams (e.g., tourism fees, licensing, or royalties on intellectual property associated with the sites).

The Issuer

The issuer of the bond would be a private entity, a special purpose vehicle (SPV), created as a subsidiary funding corporation and take the form of a limited company or partnership. For the Lab, it was given a name: the Archaeological Development Funding Corporation.

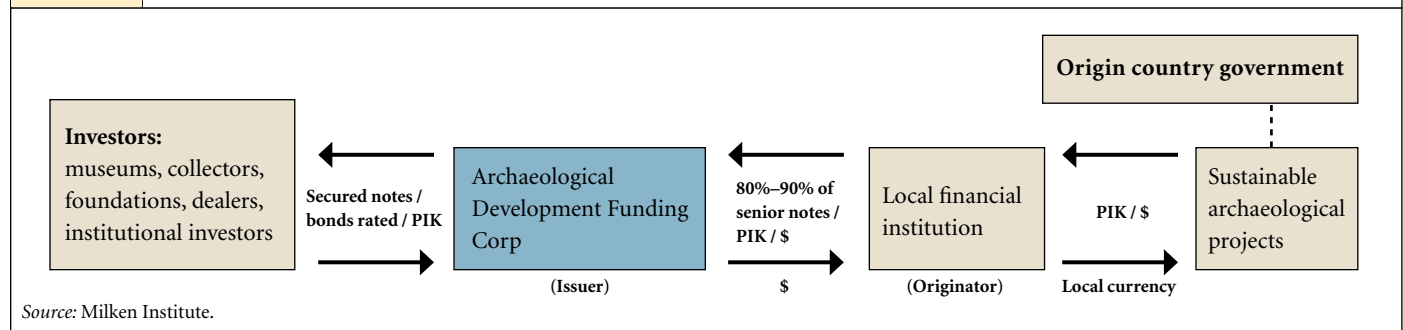
The SPV would have its own board of directors, comprising stakeholders in the process (countries of origin, local archaeologists, national museums, market country museums, financial institutions in both market and origin countries, and ministries of antiquities and culture), and would work with the bond originator (the bank). The Archaeological Development Funding Corporation would receive 80 percent to 90 percent of the senior notes (the bank debt), as is customary for super senior tranche

(prime) collateralized loan obligations. The corporation would pool the bond's "assets"—the projects—into securitizations for its investors, providing the SPV some protection from default. The projects would receive the investment capital (through appropriate national, state, or local agencies or other institutions) and return a payment in kind, either from the loan or sale of artifacts.

The "payment in kind" remained problematic, noted many participants, in light of existing patrimony rights across much of the world. But it was also noted that including payment in kind in the model would probably establish a greater incentive for current collectors to invest in the model.

FIGURE
4

Archaeological development bond model



The Investors

With a bond model, investment involvement could expand past the traditional market participants: the collectors, dealers, and museums. Investors would now include foundations and institutional investors, such as pension funds, hedge funds, and insurance companies that manage large pools of capital. The securitization market—in which assets are acquired, classified into pools, and offered as collateral for third-party investment—has grown into a \$6.6 trillion market over the past thirty years.⁴⁶ Tapping into the U.S. and international investor market could open the door to unprecedented capital resources.

The bond's interest could be paid to the investors through secured notes on the revenue generated from project-based income and the estimated market value of artifacts found. Investors could also receive an actual share of the payment in kind, through either a loan or as a negotiated amount of return, the value of which would be determined by the market price of the objects and the interest rate established in the senior note.

ACTION ITEM:

Explore the feasibility of ADB issuances

- Investigate local and international bond market regulations.
- Establish primary relationships with potential originators, issuers, and investors.
- Identify potential challenges to international investment in local institutions.
- Identify potential SPV board members, and make initial contacts.

A registry of all artifacts currently in museums and collections would be immense and significantly labor-intensive.

2

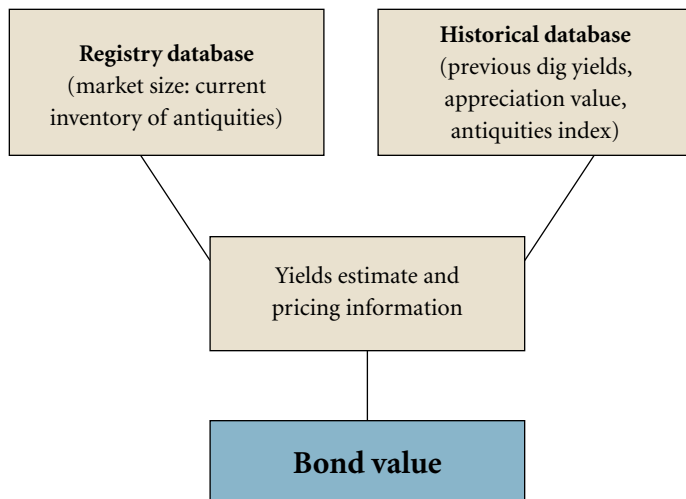
STEP

Develop the bond

Determining the market value of an archaeological development bond was the source of much discussion during the Lab. Understanding the economic value of art, especially art that is not yet excavated, has long proved difficult. Pieces that are deemed “priceless” within an archaeological context are quickly given a dollar figure upon arrival at an auction house or dealer.

When determining worth and value, economists look to indexes and market trends to predict price. For both the legal and illegal markets in antiquities, this has proved to be a significant challenge. Lab participants discussed the structure and costs of a potential registry of objects to aid in price discovery, by documenting the find and sale of legally acquired objects, as well previous dig yields and the previous auction of archaeological items. Figure 5 demonstrates how such a system would benefit the ADB model, using previous market evidence to establish future pricing.

FIGURE
5

Establishing bond value

Source: Milken Institute.

There was significant debate during the Lab as to the feasibility and functionality of such a registry. There was agreement that a registry of artifacts currently in museums and collections would be immense and significantly labor-intensive. As such, a realistic registry would likely start from the present day onward. It was determined that a registry would benefit financing endeavors, given the value that could be assigned to antiquities within the information infrastructure for a legal market. Its effectiveness in assisting legal and regulatory enforcement was subject to debate during the session and is an important topic for further exploration. Models for data systems have been developed in such countries as Italy, while the beginnings of registries promoted by the Getty and other museums can be expanded. The group proposed holding a workshop to address information technology resources.

There are, however, other options that would safeguard investors from unstable investments. The lack of transparency in international markets and, specifically, in underdeveloped markets can often lead to greater probability of failure. Safeguards could be put in place to mitigate risk and thereby increase the value of the bond. For example, a recent addition to the provenance debate is the concept of title insurance. Similar to that which is already used for other art, insurance for antiquities would ensure that an object’s provenance was legitimate, thus creating a higher market value for the piece. Discussion of this method of insurance focused on the ability to prepare adequate due diligence.

Within the bond model, further protection could be given to the pool by source-country governmental guarantees through over-collateralization. This additional security can be seen as part of the ADB model in figure 6. Participants discussed the feasibility of limited funding, perhaps from cultural ministry budgets, to the SPV from the country of origin. Credit enhancement by sovereign or bi- or multilateral development finance agencies could also lower transaction costs.

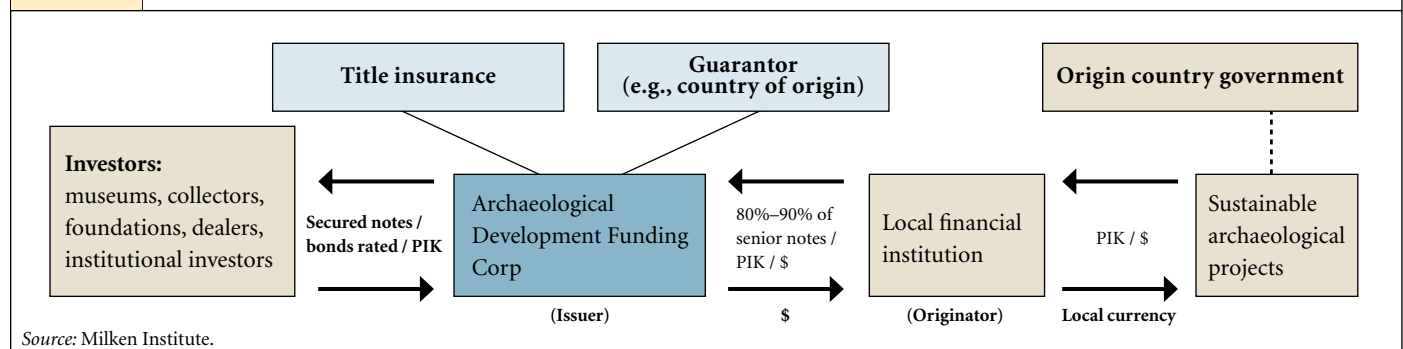
ACTION ITEM:

Determine potential bond values

- Examine the cost and feasibility of an object registry on a case-study basis in a specialized workshop.
- Determine the criteria for a registry based on current treaties and patrimony rights.
- Identify the role of title insurance and governmental participants in risk mitigation, and make initial contacts.

FIGURE
6

Additional risk protection for ADBs



Select sustainable projects

3
STEP

Investment risks, like archaeological discovery, are a function of probability distributions. By linking geographic information systems, archaeological data on find yields, and valuation data, the econometrics of estimating yields from archaeological excavation are not remarkably different from other markets.

While there are no guarantees that an excavation will lead to the next Euphronios Krater, the value of any potential site rises when cultural knowledge about the site remains intact. And both the tangible and intangible attributes of cultural and archaeological assets can be realized through the price discovery and valuation that occur in any market where assets are recognized both for their intrinsic value and their ability to generate income streams.⁴⁷ Therefore, projects within the archaeological development bond model must be selected to ensure a well-rounded portfolio. This diversification not only mitigates investor risk but also opens a variety of sites to sustainable project development.⁴⁸

Lab members discussed the need to address long-term community development as a means to bridge current funding gaps on national and local levels. The archaeological development bonds should target projects that bring financial benefit directly to local populations that would, as a result, increase their participation in and appreciation of their cultural heritage. A community in Peru, for example, could build a small museum around a Chimu site, while the federal Ministry of Culture prepares a new wing of the National Museum dedicated to Incan stonework from a sponsored dig in Cusco. Avoiding the bureaucratic traps that arise when national and regional funding bypasses local communities, the bonds would encourage economic growth on the ground, while providing overall returns.⁴⁹ At every level of the value chain, bond funding would generate sustainable revenue to provide incentives to decrease the looting and illegal sale, and increase the valuation of cultural capital.



SITE MUSEUMS IN THE TITICACA BASIN IN SOUTHEASTERN PERU

Site museums bring revenue from archaeological and cultural tourism into local communities that often see artifacts removed from the ground and shipped abroad.

Photo courtesy of Charles Stanish, University of California, Los Angeles.

The idea of pooling revenue sources to increase cultural capital is hardly new. The boom of ecotourism in the late 1990s underscores the ability for a market to transform intangible assets into a billion-dollar industry.⁵⁰ Combining travel and cultural appreciation into a new industry, archaeotourism, would allow for different sources of capital to be combined within the ADB model to ensure sustainability.

COMMUNITY CONSERVATION IN COSTA RICA: A SUCCESS IN ECOTOURISM

Through much of its existence under Spanish rule, Costa Rica's natural resources remained unspoiled. However, after 1821, when the country gained its independence, an economic and industrial boom led to destructive production policies.⁵¹ Dependent on agricultural crops, such as coffee and bananas, and experiencing intensive cattle grazing, Costa Rica began to see the decline of its vast ecological resources, including the last remaining virgin dry forest in the world.

Economic stability emerged during the second part of the twentieth century, along with a shift toward conservationism. Scientists from around the world focused on the importance of preserving Costa Rica's natural habitat. It was during this same period that ecotourism began to grow. The business of providing ecologically friendly vacations has now grown into a billion-dollar industry.

It is into this climate of social and ecological change that Dan Janzen, Ph.D., of the University of Pennsylvania entered Costa Rica. The international community may have been involved in the conservation of the region, but the local populations remained dependent on the agricultural market that contributed to the deforestation. With community participation, Janzen created an innovative conservation program for the Guanacaste region, establishing a 75,000-hectare reserve in the late 1980s. Local residents were given compensation for the land that was included within a national park, and were invited to become wardens, caretakers, and research assistants. Those who were once part of the destruction—whether farmers, ranchers, or poachers—were brought into the program.

Subsequently, the national park has generated new income, employment, and opportunities for the surrounding community. The Guanacaste National Park has become a center for Costa Rican tourism, as well as a model of how to create a sustainable link between conservation and economic and social stability.⁵²

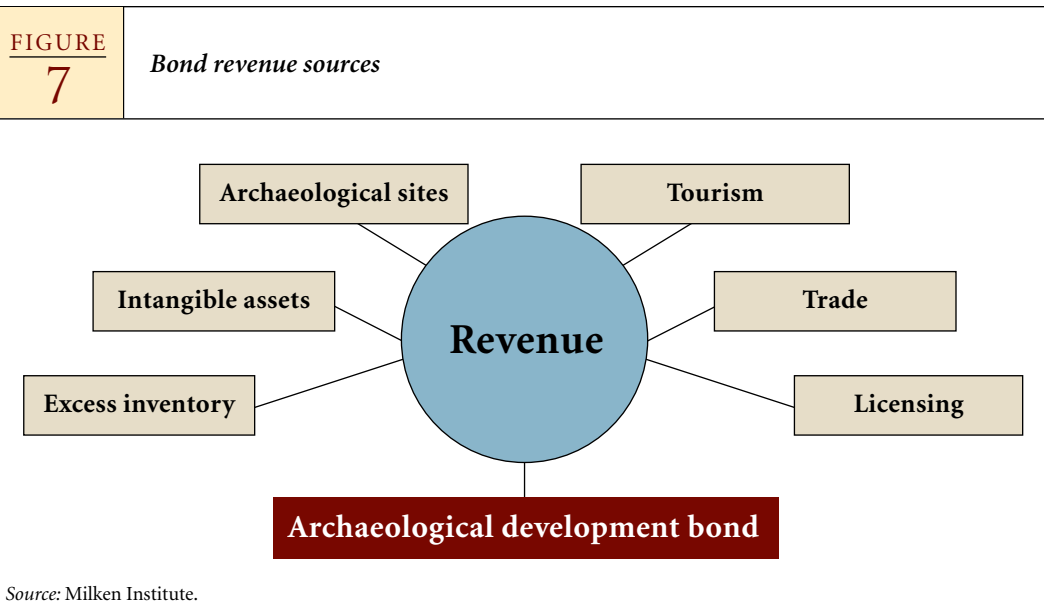


Figure 7 demonstrates the array of cash-generating elements to be found in archaeotourism. This model moves beyond reliance on philanthropic and governmental aid, and allows for continued cultural exploration and understanding. Participants discussed the different revenue sources and how individual projects could contribute to each possible channel of capital.

The ability of archaeological excavation to promote tourism—whether it be around the discovery of the terra cotta army at Xi'an or Mayan jungle sites in Belize—is substantial. Excavations can send objects to museums; excavation sites can become part of larger archaeological parks themselves. Licensing can include rights to clothing, merchandise, and media productions. Selecting development projects within the bond model will therefore be a multilayered process.

Participants also discussed what effect excavations for educational or research purposes would have on cost efficiency and how the selection of a diverse group of projects would enhance revenue sources and overall cultural understanding.

ACTION ITEM:

Survey possible sites and projects

- Compile a list of potential archaeological development projects.
- Evaluate the costs, returns on investment, and feasibility of potential projects.
- Conduct a survey of other tourism models to assess unrecognized needs.

Lab participants determined that more research is necessary before concrete models can be put into place. Studies on the size of the market and the feasibility of economic incentives need to be conducted. Therefore convening small working groups to evaluate the best next steps is necessary to provide an adequate foundation for progress.

The Milken Institute is committed to reaching out to participants, as well as other industry experts, to continue the dialogue on archaeological discovery and conservation. Working groups will be arranged around the country and via conference line, with each working on a specific set of action items. The teams are expected to regroup at a future Financial Innovations Lab to put forth future agendas.



Financial tools can alleviate the burden that countries of origin face, by providing increased funding for archaeological development.

CONCLUSION

The demand for archaeological artifacts has encouraged a billion-dollar black market and the destruction of the world's cultural heritage through looting and vandalism. While attempting to quell the desire to own a piece of the past may prove impossible, much can be done to regulate the supply. After recently publicized travesties, such as the looting of the National Museum of Iraq, mainstream awareness of the ever-expanding problem is beginning to take hold.

To ensure legal archaeological discovery and conservation, the stakes must change and the players must be given incentives to alter their current perspectives. All market participants, from looters and collectors to archaeologists and museum curators, must broaden their preconceived notions about right and wrong, and what constitutes preservation.

Whether through long-term exhibit leases, museum sponsorship, or archaeological development bonds, it is clear that an economic model can be used to regulate the market. In shifting the focus from the value of specific objects to overall cultural appreciation, financial tools can alleviate the burden that countries of origin face, by providing increased funding for archaeological development.

The next step is to provide capital to those individuals, agencies, and areas that need it most: to researchers and academics, to law enforcement and government, to local communities and cultural ministries. It is through helping those on the ground that the most significant change can occur. What is at stake is the preservation of a collective human identity for future generations. From those who came before us and left behind the evidence of their lives, we understand where we have been and where we are going.

APPENDIX I

*Financial Innovations Lab Participants***Ali Aboutaam**

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APPENDIX II

Literature Review

AUTHOR	TITLE	PURPOSE	RESULTS	FINANCIAL INNOVATION(S)
Roger Atwood: 2004	Stealing History: Tomb Raiders, Smugglers and the Looting of the Ancient World	A case study of Peru's antiquities trade at each step of the value chain.	_____	_____
_____	Is It All Loot? Tackling the Antiquities Problem	Conference proceed- ings with field experts. Debate over whether returning looted objects to source countries hurts the field and appreciation of the pieces.	General consensus is that it is better to have an object in a museum, where it can be studied and viewed by both experts and the public, than for it to be stored out of sight in the source country.	_____
Derek Fincham: 2007	Why U.S. Federal Criminal Penalties for Dealing in Illicit Cultural Property Are Ineffective, and a Pragmatic Alternative	Do legal restrictions hinder or help the problem of illicit trade?	The U.K. approach of administering search-and-sell permits is the most novel approach to date. It not only encourages proper discovery and subsequent conservation but also allows for the state to keep objects of great value and put all others into the legal market.	Bring the U.K. approach to places like Italy, South America, and the American Southwest.
Bernard Frischer: 2006	The "Grand Compromise": A Hybrid Approach to Solving the Problem of Looted Art	How can the market encourage legal discovery?	Frischer's compromise is that museums in market countries, with financial help from collectors, would sponsor a host museum in the country of origin to excavate and then share, through a long- term lease model, the excavated objects. If nothing is found, the host museums would pay back the investment from the sponsor museum through loans of items already in their collections.	Use a long-term lease model to encourage collector participation.
Michael Hutter and David Throsby, eds.: 2008	Beyond Price: Value in Culture, Economics, and the Arts	Can an economic model calculate the market value of art?	Economic and artistic value, while often different, must be understood together to calculate total market value. Price may not equal value, but more study may bring the two closer together.	When attempting to formulate an economic model and pricing of antiquities market, one must consider both demand and artistic merit/opinion.
Morag Kersel: 2007	Transcending Borders: Objects on the Move	Are there multiple motivations for looting?	The motivations behind looting go beyond market demand, stemming from nationalism, conflicting preservation plans, colonialism, and traditional practices. Focus on Israel and the Palestinian Authority.	When attempting to provide an incentive for looters to stop, one must consider all reasons, not purely financial, for the looting itself.

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Literature Review

AUTHOR	TITLE	PURPOSE	RESULTS	FINANCIAL INNOVATION(S)
Morag Kersel: 2006	From the Ground to the Buyer: A Market Analysis of the Illegal Trade in Antiquities	How is the antiquities market defined, if not simply by source and market nations?	With a focus on Israel, the piece examines how an artifact can move from a back yard in Palestine to a respectable dealer in Jerusalem, and on to a collection in New York. Israeli law allows artifacts from collections dating before 1972 to be legally bought and sold in and out of the country. A registry number has to be given but can be easily changed or modified to allow for multiple objects to have the same number, allowing objects to slip past customs "legally."	How do regulations encourage corruption in the market, and what incentives could curb looting and encourage dealers to work within the legal system?
Michael Kremer and Tom Wilkening: 2007	Protecting Antiquities: A Role for Long-Term Leases?	Can long-term leases, rather than the current prohibition on trade, benefit the antiquities market?	Instead of having an absolute ban on the export of antiquities, the authors suggest that it is both economically and culturally beneficial to set up long-term leasing. The funding would not only secure the object for public viewing but also foster new and archaeologically sound excavations.	Bringing long-term leases into the market would encourage open trade and reduce the demand for antiquities, thus curbing the illicit market.
Simon MacKenzie: 2002	Regulating the Market in Illicit Antiquities	What regulatory efforts can be made to curb looting?	Argues that because the UNESCO and UNIDROIT conventions were drafted to be all-encompassing, they contain large loopholes through which the illicit market moves. For example, under UNESCO, there are no specific regulations for prosecuting dealers and collectors in market countries who purchase objects with questionable provenance.	Incentives—from archaeological education to alternative income sources—could stem looting. Also, dealers and collectors should take more responsibility for documenting market transactions and form a collective with a database similar to the Art Loss Registry.

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