The Value of Music and the Trappings of the Marketplace, 1990–2005

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Music is a commodity under siege. The highest grossing product of the music business, by far, is the recorded song.[1] Songs have been plummeting in value for more than fifteen years—well before 1999, the year that Shawn Fanning enabled free file sharing of recorded music with Napster, the homegrown software built for the internet and the compression algorithm MP3. As will be shown in this paper, real album prices in the U.S. have in fact dropped consistently since 1990.

Moreover, there appears to be much asymmetry among the distribution of gains for buyers and sellers in the recorded music marketplace. Trade organizations, governmental agencies, and industry analysts concur that demand for recorded music is at an all time high. This includes the International Federation for the Phonographic Industry (IFPI) and its national affiliates—like the Recording Industry Association of America (RIAA), the Organization for Economic Cooperation and Development (OECD), *Billboard* magazine, and music futurists.[2] Yet record labels and their artists are in crisis. Global music sales have been catastrophically down in value since 2001, prompting often-worn comparisons to a perfect storm where the end of the CD conversion era, the rise of file sharing, competition from other entertainment and lifestyle media, and a slower economy have all combined to depress the value of sales.[3]

I would like to suggest that today there appears to be a palpable divorce between recorded music's exchange value and its use value. Although this terminology is reminiscent of Karl Marx's discussion of the commodity "labor-power" in the famous first chapter of *Das Kapital*, my frame of reference includes both a supply and a demand analysis of recorded music and not just a discussion of the production of music itself.[4] Four international record labels, i.e. Universal, Sony-BMG, Time-Warner, and EMI, largely determine the entire supply of music. Demand is another matter. The buyer is increasingly treating music as water. It is a useful and necessary commodity, but plentiful and cheap.

Alfred Marshall, and fellow economists today, might talk of an increasing total utility for recorded music but a decreasing marginal utility when compared to other goods.[5] This is because at the equilibrium condition for the consumer it is posited that the marginal utility per dollar spent on recorded music would have to equal the marginal utility per dollar spent on, let us say, other goods. As the price of recorded music has indeed fallen against other goods, the inevitable implication is that the ratio of music's marginal utility to other goods is adjusting downwards. In other words, recorded music's relative marginal utility is falling and music is becoming less precious.

With two goods, x and y, the equilibrium condition is $\frac{MUx}{p_x} = \frac{MUy}{p_y}$ and $\frac{MUx}{MUy} = \frac{p_x}{p_y}$.

If we let p_x be the price of recorded music and p_y be for the price of the other goods, then as p_x drops relative to p_y, equilibrium is mantained only if MUx, the marginal utility of music, drops relative to MUy, the marginal utility of other goods.

The above argument about the diminishing marginal utility of music relative to other goods should be considered only for legally purchased music. A distinction has to be made, of course, between the marginal utility of legally bought music and the marginal utility of pirated music. Pirated music is acquired online over the internet or physically some place else. But it is the marginal utility of legally bought music that concerns the music trade.

Pirated music, nevertheless, is the big elephant in the room. Consumer satisfaction is the basis of utility theory and the existence of free music, conveniently accessed from one's desktop, impacts the utility function for recorded music that is purchased legally. In addition, the prevalence of piracy signals important objective information about substitute prices for recorded music. Though consumer theory maintains the independence of a consumer's utility function from consumer incomes and prices, this surely detracts from satisfaction.

The effect of internet music piracy on the market for legally purchased recorded music products can be addressed directly with supply and demand diagrams. A garden-variety analysis would indicate a leftward shift in the demand curve due to a drop in consumer preferences. The change in demand would be measured along a static supply curve, resulting in a lower equilibrium quantity and price for legitimate recorded music.

U.S. and global industry figures of wholesale shipments and units sold at retail lend support to the predictions of the supply and demand model. Much publicity was given to the rise of individual downloads of single digital tracks in 2005. In the aggregate, however, the picture is clear: RIAA and Nielsen SoundScan data in the U.S. and IFPI global figures both lead to the conclusion that the amount of recorded songs sold legally dropped considerably since 2001 in the U.S. and the rest of the world because album sales took a dive.[6]

Prices of recorded music product also dropped as expected. Nevertheless, prices were falling well before there was internet piracy, so the drop cannot be explained just on account of the advent of free music via a computer, starting with Napster in 1999.

A price index for recorded music products in the U.S. is calculated below. It goes back to 1990 and shows that, in real terms, music prices had been dropping significantly and continuously well before internet piracy became rampant. This finding for the U.S. music market likely generalizes to many other countries inside and outside the OECD area, as will be argued later.

Some observations about the price index follow. The index measures the evolution of nominal and real prices for a bundle of recorded music products. The bundle is made up of CDs, music video, LP/EPs, CD singles, cassette singles, and vinyl singles. Because DVD audio and digital downloads (almost all from Apple's iTunes) did not exist in 1990, they are not included in the index. The researcher who follows the market will know that the consequence of this omission is negligible, for the significance of this product is still relatively small. Digital downloads accelerated last year[7], but the index captures the historical trend in prices up to that moment.

The price index is derived not by a survey but by implicit calculation of the above product prices. The computation is representative of the U.S. music market, for it is based on aggregated census data collected from all member labels of the RIAA. As the RIAA represents more than nine-tenths of the record labels doing business in the U.S., the price index captures the value of wholesale product in the recorded music trade, specifically the movement of minimum suggested retail prices (MSRP). While the RIAA assures the labels that it will keep their reported MSRPs confidential because it only publishes aggregated data, it is easy to disaggregate the figures to an average unit basis. The index, with some additional explanation, is shown in Table 1.

Year	Nominal Prices	Real Prices
1990	100.0	100.0
1991	107.0	103.8
1992	108.3	102.2
1993	109.4	100.4
1994	108.6	96.9
1995	108.4	94.4
1996	107.2	91.7
1997	111.3	92.5
1998	113.5	92.9
1999	114.5	91.5
2000	115.5	89.6
2001	120.4	90.3
2002	121.4	89.6
2003	121.1	87.0
2004	117.3	82.1

Table 1. Wholesale price index of recorded music products, 1990-2004.

Sources: RIAA, Annual Reports, 1989-2005. The annual change in the U.S. Consumer Price Index was taken from *The Economist*, usually in March of the year in question. See the Appendices for more information and for an example of the computations between 1996-2004.

Additional Notes:

• The index looks at the prices of CDs, cassettes, cassette singles, CD singles, music videos, vinyl singles, LPs, and EPs. It is a chained index that uses two base years for the expenditure weights, first 1990 and then 1998. It therefore recognizes the drop in cassette purchases towards the end of the decade.

• Music DVD product and SACD are excluded since 1998 to facilitate comparison with earlier years.
•Digital singles/albums accounted for only a small fraction of the business starting in 2003, and though they picked up in 2004 they are safely ignored, as are music DVDs and SACDs.

It is important to realize that the above figures are likely to underestimate the drop in prices. This is because the labels were known to give discounts to retailers throughout the 1990s below minimum suggested retail price. The distribution of those discounts is unknown, but the impact on the data would have been considerable and the fall in the overall value of music even more precipitous.

If real prices of recorded music have been falling in the most important music market since 1990, and much of this has little to do with internet music piracy, it is right to ask what factors other than piracy affected the value of music negatively. The 1990s, after all, were golden years for music sales. The conversion into CDs was in full swing in the U.S., OECD countries, and beyond. The economy, save for 1991-92, was doing well.

Seen from this perspective, the drop in real recorded music prices in the 1990s is surprising. In 1993, *Billboard* published an op-ed piece by the president of EMI distribution in the U.S., Russ Bach, sounding the alert about declining real music prices in an ebullient market.[8] The evidence suggests that record companies did not wish lower real prices to stimulate demand when it was strong anyway.

To understand the riddle of music prices in the 1990s, when much more music was being bought than today, it is good to focus more in-depth on the supply-side of recorded music and the particular interaction that existed, and still exists, between the sellers of recorded music product, i.e. the record labels, through their distributors, and the brick-and-mortar retailers.

Recorded music product is not all created equal. It is crucial to distinguish between successful and unsuccessful records, and generally megastar release and catalog product. Megastar releases move the market and occupy commanding shelf space among physical retailers, while other product, often referred to as "catalog," does not. Releases by new artists can become hits, but this is not the norm and such product will eventually become a catalog sale for the retailer. In practice, the business distinguishes between "current releases," "catalog" (i.e., product that has had a shelf life of between eighteen and thirty-six months), and "deep catalog". Hits can become "catalog" or "deep catalog," but titles that stay in the Billboard 200

Album Chart remain "current" and are generally priced differently compared to the regular, non-hit, product.[9]

A price elasticity of demand argument suggests that megastar releases are subject to inelastic demand. This, after all, is the music the buying public loves and that drives the market. Yet in the 1990s sellers could not maximize revenue by raising prices of their top-selling records. Had they been able to do so, the overall price of music would not have dropped as it did.

The reason for the inability of the labels and their retailers to push the prices of their top-selling music higher is not just a matter of the law but economics. U.S. record labels cannot fix prices and enforce minimum price standards for retailers: when they tried that in the late 1990s, they were promptly taken to court.[10] Rather, it is the existence of perfect competition at retail that drives the prices of hits down and prevents the maximization of seller's revenue. This is because, unlike catalog, hit music is ubiquitous and carried in multiple record store locations, including hypermarkets and other. The full operation of perfect competition at retail, in short, has prevented the recorded music industry from taking advantage of higher prices from the sale of hits.[11]

In economic terms, the curse of music may be that it is a mass consumption commodity with many suppliers that wish to carry the product and over which sellers have little control. This seems to go against the prevailing wisdom that labels were in complete control of distribution prior to the internet. The price dichotomy for the most and least wanted music seems to work against the best interest of the labels. Moreover, variable pricing for music does not change things much. Even when price monitoring leads in parts of Europe to the alteration of an initial selling price to better exploit existing demand, there are limits to what can be done in the market for hits.[12] Perfect competition at retail still robs the labels of their thunder.

The above reasoning is made independently of the so called "loss-leading factor" in music sales. Since the mid 1990s, and practically all over the developed world, hypermarkets were prepared to take a loss on music to drive customers in to get them to buy other, more expensive goods. Examples are Wal-Mart and Best Buy in the U.S., Carrefour in France, Tesco and WHSmith in the U.K., and the Metro AG Group in Germany. Record labels, naturally, came under pressure from their retail accounts to reduce wholesale prices globally. Additionally, hypermarkets offered lower prices for goods across the board and the convenience of all-in-one shopping.

Worldwide, consumers flocked to them, driving recorded music purchases away from record stores and putting them into the realm of mass merchants. As a result, the value of recorded music dropped further.

Today, the labels are trying to get Apple to recognize that not every song is worth the same to the consumer. There was little they could do to change business practices before the internet era, and they certainly could not maximize revenue by selling their best-selling product at higher prices. But, as digital downloads are purchased from iTunes, which has become almost a single point of sale for online music, there is a possibility that the recording industry might at last be able to negotiate better prices for megastar releases and lower prices for catalog product. Jim Urie, U.S. President of Universal Distribution, who represents the world's largest label group, is lobbying for this change with other record company executives.[13] The principle of revenue maximization based on a price elasticity of demand analysis for music could at last come into its own in the digital domain.

The price mechanism is usually regarded as sending strong signals to traders. In economic theory, sellers are expected to offer more product with rising prices, not falling prices. Yet in the 1990s, the opposite was the case in the music market. There was more product put out while overall prices for music dropped, and hit music, the main reason for record companies being in business, sold "cheap." It is suggested that this is not the result of a lower equilibrium price for music because of mass production improvements in the manufacturing of CDs. Such an effect would drive the supply curve of recorded music to the right, and explain lower prices. But this is not what happened.

It should be realized, first, that the manufacturing cost of CDs is but a small component of its selling price, close to five percent. Second, the cost of talent, the key input in the business, shot up dramatically in the early 1990s. Following Papadopoulos (2004)[14], Alhadeff and Sosnick (2005)[15], and Papadopoulos (2005)[16], the contractual cost of an artist can be regarded as a fixed, or "establishment," cost for a label. Such fixed costs, which represent anywhere between twenty to thirty percent of total cost, and probably more, rose considerably when landmark contracts for Michael Jackson and Barbra Streisand exceeded $60 million for the first time in 1992-1993. This more than likely neutralized any possible gains from cheaper mass production. (Mass production savings significantly affected the supply curve of CD players, but not CDs.) Moreover, marketing budgets, normally included in the "establishment" cost of an artist and valued at about

half the fixed cost, also rose over time and added more weight to a label's overhead.[17]

Yet, in spite of all this, record labels continuously supplied more music at lower prices. It seems reasonable to speculate that for the seller of music, quantity supplied, while still based on the expectation of profit, appears to be more a function of total revenue than selling price. It could be argued, therefore, that the essential factor in the revenue equation of the record label is the amount of quantity sold. Indeed, the signing of an artist has always been based on the perception of strong demand and a label executive is judged, in the end, by whether or not he has identified winners in the music race.

Indeed, the selling price of a record is, more often than not, an afterthought in the record business. It could even be said that, with few exceptions, the price mechanism is incidental, ineffectual, and peripheral to decision-making in the business. A label, as noted by Papadopoulos (2004), is a multi-product business.[18] Out of the roster of artists it initially signs, only a handful will get full support in the marketplace. Which artist will draw support is decided, most of all, on a hit-or-miss basis. The music business has been using the "let's-put-her-out-there-and-see-if-she sticks" approach, and relied on volume sold.

The cost function of a record label has been analyzed by Papadopoulos (2004), with contributions from Alhadeff and Sosnick (2005), and further additions pertaining to issues of financial risk and return by Papadopoulos (2005). This paper has addressed some of the revenue concerns of record labels. To an extent, it is argued that the marketplace functions in a way that prevents full maximization of label receipts and profits.

It could be argued that the business of music is high in startup investments, and that much of the actions of the record labels as sellers are determined by the desire to recoup the money spent when they signed talent. Under this view, the labels would likely sell product at any price to replenish their coffers. Thus, the particular *modus operandi* of the supply curve of recorded music can be traced back to the labels themselves. The implication, of course, is that the price mechanism is being distorted further on the supply side by the desperation of the record companies.

Moreover, this paper suggests that the compelling incentive for sellers of recorded music is the expectation of a high volume of demand. Selling prices, usually relied upon in economic theory to divine the intentions of sellers, are not the trigger of supply. The price mechanism, therefore, is not

as crucial to decision-making in the music business. Sellers, it appears, come to market in spite of adverse pricing, and this is not just a consequence of piracy and the internet.

Finally, is important to note that the immediate exchange value of recorded music, i.e., the sale of a CD or a song, is not the final income receipt for a label. A placement of new record releases, even at lower prices, usually creates a domino effect on a label's catalog. Established and mid-level artists tend to drive demand for earlier work with the release of new material.[19] Moreover, record companies can exploit long-term revenue streams from a CD or song. Labels typically own the master recording, which they can license for various new uses, such as ringtones. They can also sell artists' merchandise at concert locations or other venues.[20]

It should be realized as well that music is a commodity packaged with a bundle of legal rights that can be exploited horizontally. This is because the corporations that own the major four record labels also own the top five music publishing houses.[21]

Two of the rights that songwriters are compensated for are the right of reproduction of a song and the right of its public performance (also known as the mechanical and performance rights). Publishers collect for songwriters on both counts and generally split the collections with them 50/50. Although the cash cow of the business has always been the sale of recorded music, there is a sizeable flow of money towards publishers and songwriters. In fact, publishing revenues are, both domestically and internationally, growing considerably.[22] The fortunes of the music publishing industry, moreover, are likely to continue improving with new ways to access music and better track plays.

This cross-ownership between recorded music sales and music publishing gives reason to sellers of music to keep coming to market even when the price of a recorded song is judged to be sub-par. The 2004 purchase of Time Warner by Edgar Bronfman, Jr., Thomas H. Lee Partners, and Bain Capital for US$2.6 billion is a good example. The most important consideration for the buyers appears to have been the future value of Warner/Chappell's publishing assets, not the potential revenue of Time Warner's recorded music operations.[23]

Labels' Unit Shipments (in millions)

	1996	1997	1998	1999	2000	2001	2002	2003	2004
CDs	779	753	847	939	943	882	803	746	767
Cassettes	225	173	159	124	76	45	31	17	5
Cassettes Singles	60	42	26	14	1	-2	-1	N/A	N/A
CD Singles	43	67	56	56	34	17	5	8	3
Music Videos	17	19	27	20	18	18	15	20	33
Vinyl Singles	10	8	5	5	5	6	4	4	4
LPs/EPs	3	3	3	3	2	2	2	2	1
DVD	-	-	1	3	3	8	11	18	29
Totals	1137	1063	1124	1161	1079	969	860	798	814

	96/97	97/98	98/99	99/00	00/01	01/02	02/03	**03/04**
CDs	-3	12	11	0	-6	-9	-7	**3**
Cassettes	-23	-8	-22	-39	-41	-31	-45	**-70**
Cassettes Singles	-30	-37	-46	-91	-215	-67	N/A	**N/A**
CD Singles	54	-16	0	-39	-49	-74	84	**-62**
Music Videos	10	46	-27	-8	-3	-17	35	**65**
Vinyl Singles	-26	-28	-2	-9	15	-20	-14	**-7**
LPs/EPs	-7	26	-15	-24	5	-26	-12	**-12**
DVD	-	–	400	32	139	35	64	**66**
Totals	-6%	6%	3%	-7%	-10%	-11%	-7%	**2%**

Labels' Dollar Value($millions at Suggested List Price)

	1996	1997	1998	1999	2000	2001	2002	2003	
CDs	9935	9915	11416	12816	13215	12909	12044	11233	11447
Cassettes	1905	1523	1420	1062	626	363	210	108	24
Cassettes Singles	189	134	94	48	5	-5	-2	N/A	N/A
Music Videos	236	324	508	377	282	329	288	400	607
CD Singles	184	273	213	222	143	79	20	36	15
Vinyl Singles	48	36	26	28	26	31	25	22	20
LPs/EPs	37	33	34	32	28	27	21	22	19
DVD	-	1	12	66	80	191	239	370	561
Totals	12534	12237	13723	14585	14324	13741	12614	11854	12155

	96/97	97/98	98/99	99/00	00/01	01/02	02/03	**,03/04**
CDs	0	15	12	3	-2	-7	-7	**2**
Cassettes	-20	-7	-25	-41	-42	-42	-48	**-78**
Cassettes Singles	-29	-29	-49	-90	-215	-70	N/A	**N/A**
Music Videos	37	57	-26	-25	17	-12	39	**52**
CD Singles	48	-22	4	-36	-44	-75	83	**-58**
Vinyl Singles	-25	-28	9	-6	19	-21	-14	**-7**
LPs/EPs	-10	2	-6	-13	-1	-25	6	**-11**
DVD	–	–	–	21	137	25	54	**52**
Totals	-2%	12%	6%	-2%	-4%	-8%	-6%	**3%**

Labels' Real Dollar Value ($millions)

	1996	1997	1998	1999	2000	2001	2002	2003	2004
CDs	8402	8248	9339	10209	10208	9632	8849	8075	7943
Cassettes	1611	1267	1162	846	484	271	154	78	16
Cassettes Singles	160	111	77	38	4	-4	-1	N/A	N/A
Music Videos	200	269	416	300	218	246	212	287	421
CD Singles	156	227	174	177	110	59	14	26	10
Vinyl Singles	40	30	21	22	20	23	18	15	14
LPs/EPs	31	28	28	25	21	20	15	16	13
DVD	–	–	10	53	62	142	176	266	389
Totals	10600	10180	11216	11617	11064	10252	9268	8522	8435

	96/97	97/98	98/99	99/00	00/01	01/02	02/03	**03/04**
CDs	-2	13	9	0	-6	-8	-9	**-2**
Cassettes	-21	-8	-27	-43	-44	-43	-50	**-79**
Cassettes Singles	-31	-30	-50	-91	-211	-70	N/A	**N/A**
Music Videos	35	54	-28	-27	13	-14	36	**47**
CD Singles	46	-23	2	-38	-46	-76	79	**-60**
Vinyl Singles	-26	-29	6	-9	15	-22	-16	**-11**
LPs/EPs	-11	0	-9	-16	-4	-26	4	**-15**
DVD	–	–	429	17	129	24	51	**47**
Totals	-4%	10%	4%	-5%	-7%	-10%	-8%	**-1%**

Appendix 1. U.S. recorded music industry scorecard, 1996-2004.

Sources: RIAA, Annual Reports 1990-2005. The cost of living Indices used to estimate labels' real dollar value were as follows: 1990 = 100; 1995 = 114.8; 1996 = 118.2; 1997 = 120.2; 1998 = 122.2; 1999 = 125.6; 2000 = 129.5; 2001 = 134.0; 2002 = 136.1; 2003 = 139.1; and 2004 = 144.1. *The Economist*, passim. Totals include digital singles and digital albums in 2004, as well as DVD audio and SAC. To see that particular data, go to www.riaa.com.

Nominal Prices

	1996	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*	***2004***	*96/97*	*97/98*	*98/99*	*99/00*	*00/01*	*01/02*	*02/03*	***03/04***
CDs	$12.8	$13.2	$13.5	$13.7	$14.0	$14.6	$15.0	$15.1	**$14.9**	3	2	1	3	4	2	0	**-1**
Cassettes	8.5	8.8	9.0	8.6	8.2	8.1	6.7	6.3	**4.5**	4	2	-4	-4	-2	-16	-7	**-28**
Cassettes Singles	3.2	3.2	3.6	3.4	3.5	3.5	3.2	N/A	**N/A**	0	13	-5	5	0	-9	N/A	**N/A**
CD Singles	4.3	4.1	3.8	4.0	4.2	4.6	4.4	4.3	**4.8**	-4	-7	5	5	10	-5	-1	**11**
Music Videos	14.0	17.4	18.7	19.0	15.5	18.6	19.6	20.1	**18.6**	25	7	2	-19	20	5	2	**-8**
Vinyl Singles	4.7	4.7	4.8	5.3	5.5	5.7	5.7	5.7	**5.7**	1	0	11	4	4	-1	0	**0**
LPs/EPs	12.7	12.3	10.0	11.0	12.6	11.9	12.1	14.5	**14.8**	-3	-19	10	15	-5	1	20	**2**
DVD	–	–	24.4	26.5	24.3	24.1	22.4	21.1	**19.3**	–	–	–	-8	-1	-7	-6	**-8**

Real Prices (1990=100)

	1996	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*	***2004***	*96/97*	*97/98*	*98/99*	*99/00*	*00/01*	*01/02*	*02/03*	*03/04*
CDs	$10.8	$11.0	$11.0	$10.9	$10.8	$10.9	$11.0	$10.8	**$10.4**	2	1	-1	0	1	1	-2	**-4**
Cassettes	7.2	7.3	7.3	6.8	6.4	6.0	5.0	4.5	**3.1**	3	0	-7	-7	-5	-18	-9	**-30**
Cassettes Singles	2.7	2.6	2.9	2.7	2.7	2.6	2.4	N/A	**N/A**	-2	11	-8	1	-4	-11	N/A	**N/A**
CD Singles	3.6	3.4	3.1	3.2	3.2	3.4	3.2	3.1	**3.3**	-6	-8	2	2	6	-7	-3	**7**
Music Videos	11.8	14.5	15.3	15.2	12.0	13.9	14.4	14.4	**12.9**	23	5	-1	-21	16	4	0	**-11**
Vinyl Singles	4.0	3.9	3.9	4.2	4.2	4.3	4.2	4.1	**3.9**	-1	-1	8	1	1	-2	-2	**-3**
LPs/EPs	10.7	10.3	8.2	8.7	9.7	8.9	8.9	10.4	**10.2**	-4	-20	7	11	-9	0	17	**-1**
DVD	–	–	20.0	21.1	18.8	18.0	16.4	15.2	**13.4**	–	–	–	-11	-4	-9	-8	**-11.6**

Appendix 2. Wholesale prices of recorded music products, 1996-2004.

Sources: RIAA figures 1996-2005. Average unit prices were calculated as the ratio of manufacturers' dollar value to shipments. Real prices are the ratios of nominal prices to the CPI of the year in question. CPI's were as follows: 1990 = 100; 1995 = 114.8; 1996 = 118.2; 1997 = 120.2; 1998 = 122.2; 1999 = 125.5; 2000 = 129.5; 2001 = 134.0; 2002 = 136.1; 2003 = 139.1; and 2004 = 144.1. *The Economist*, passim.

EXAMPLE OF COMPUTATION

2004

NOMINAL PRICES

	Quantities 1998	*Prices 1998*	*Prices 2004*	*Q98*P04*	*Q98*P98*
CDs	847.0	$13.5	$14.9	$12,620.30	$11,434.50
Cassettes	159.0	9.0	4.5	715.5	1431.0
Cassettes Singles	26.0	3.6	0.0	.0	93.6
CD Singles	56.0	3.8	4.8	268.8	212.8
Music Videos	27.0	18.7	18.6	502.2	504.9
Vinyl Singles	5.0	4.8	5.7	28.5	24.0
LPs/EPs	3.0	10.0	14.8	44.4	30.0
				14179.7	13730.8

INDEX 2004=(Value of Basket at Current Prices/Value of Basket at Base Prices)*100
=(14179.7/13730.8)*100= 103.3

The chained Nominal Index for 2004 is, therefore, 117.2 (113.5* 1.033=117.2)

REAL PRICES

	Quantities 1998	*Real Prices 1998*	*Real Prices 2004*	*Q98*P04*	*Q98*P98*
CDs	847.0	$11.0	$10.4	8808.8	9317.0
Cassettes	159.0	7.3	3.1	492.9	1160.7
Cassettes Singles	26.0	2.9	0.0	.0	75.4
CD Singles	56.0	3.1	3.3	184.8	173.6
Music Videos	27.0	15.3	12.9	348.3	413.1
Vinyl Singles	5.0	3.9	3.9	19.5	19.5
LPs/EPs	3.0	8.2	10.2	30.6	24.6
				9884.9	11183.9

Real INDEX 2004=(Value of Basket at Current Real Prices/Value of Basket at Real Base Prices)*100
=(9884.9/11183.9)*100= 88.4

The chained Real Index for 2004 is, therefore, 82.1 (92.9*.884=82.1)

Appendix 3. Wholesale price index of recorded music products, 1990-2004

Endnotes

[1] The annual revenues of recorded music in the U.S. are about $12 billion, compared to $8 billion for music products (instruments, gear, and accessories), $3 billion for music publishing, and $2 billion for concert ticket sales. This rank ordering is typical in the global music business.

[2] See the most recent *Annual Reports* of the RIAA and the IFPI (available at riaa.com and ifpi.org), the OECD report titled "Working Party on the Information Economy/Digital Broadband Content: Music," June 2005, pp. 1-132 (available at oecd.org); *Billboard,* passim*,* and David Kusek and Gerd Leonhard, *The Future of Music: Manifesto for the Digital Music Revolution* (Hal Leonard, 2005).

[3] Overall recorded music sales, physical and digital, continued to fall in 2005, and by three percent; see IFPI, "World Sales 2005: Digital Formats Continue to Drive the Global Music Market," March 31, 2005 (available at ifpi.org).

[4] Karl Marx, *Capital: Volume 1: A Critique of Political Economy,* (New York: Penguin Classics, 1990).

[5] See, for example, J.R. Hicks, *Value and Capital: An Inquiry into Some Fundamental Principles of Economic Theory,* (New York: Oxford University Press, 1976).

[6] The latest year-end U.S. figures for 2005 came out while this paper was being finished and show another overall drop in the value of total sales, physical and digital, by 0.6 percent. The fall is smaller, however, than in previous years. RIAA, "2005 Year-End Statistics," March 31, 2005 (available at riaa.com). See Appendix 1 for the drop in album sales (CDs and Cassettes) between 1996 and 2004.

[7] Nielsen SoundScan, "2005 Year-End Music Industry Report," Press Release, January 4, 2005.

[8] Russ Bach, "Let's Take A Fresh Look At Retail Pricing," *Billboard*, Aug. 15, 1993: 4.

[9] *Billboard* includes a weekly statistical summary of retail data provided by Nielsen SoundScan, called "Market Watch," from which the above definitions were taken. Geoff Mayfield, *Billboard's* Director of Charts, and Ed Christman, *Billboard's* retail expert, give much

information on the topic in their respective weekly columns, "Over The Counter" and "Retail Track."

[10] In 1997, the Federal Trade Commission (FTC) started investigating the major labels for colluding to fix selling prices and for threatening retail accounts when music was sold below its preferred minimum advertised price (MAP). The investigation ended early in 2000, with the FTC estimating that U.S. consumers paid $480 million more than they would have for CDs. Labels settled and reimbursed consumers. According to the FTC, the record labels attempted to stop retail discounting and the slide in wholesale prices and had "restrained trade."

[11] I am indebted to Mike Dreese, CEO of *Newbury Comics*, Boston's independent and trend-setting retail chain, for first bringing this point to my attention.

[12] In the U.K., where there appears to have been a greater menu of pricing options available to the consumer than in the U.S. (budget, mid-line and high-line releases), there should have been more accommodation to the pull of demand. Still, prices fell. See, for instance, "Supermarkets Successfully Take on Specialist Retailers" in *Music Business International*, October 2001: 19.

[13] Urie's remarks were made at the Berklee College of Music in Boston, when he spoke on the James Zafris, Jr. Distinguished Lecture Series for Music Business/Management on February 24, 2006.

[14] Theo Papadopoulos, "Are Music Recording Contracts Equitable? An Economic Analysis of the Practice of Recoupment," *MEIEA Journal*, 4, no. 1 (2004): 83-103.

[15] Peter Alhadeff and Barry Sosnick, "Record Labels, Artists, and Finance: A Contribution to the Economic Analysis of Cost and the Equity of Recoupment Practices in the Music Industry," *MEIEA Journal*, 5, no. 1 (2005): 13-17.

[16] Theo Papadopoulos, "Financial Risk and Return in the Music Recording Industry," *MEIEA Journal*, 5, no. 1 (2005): 19-31.

[17] An accurate cost-breakdown of a CD is given in *Rolling Stone*, Oct. 28, 2004: 26, 30. The article, by Warren Cohen, is titled "Wal-Mart Battles Labels Over CD Prices." See also, OECD, op. cit.: 43.

[18] Theo Papadopoulos, *MEIEA Journal*, op.cit., (2004): 87.

[19] Real time barcode tracking of music purchases has shown an immediate and complementary demand effect of new releases on old

releases by the same artist, a point made by Trudy Lartz, VP of Sales at SoundScan, in various demonstrations for Berklee College students during the late 1990s.

[20] For this, and other business fundamentals discussed below, see the classic Jeffrey Brabec and Todd Brabec, *Music Money and Success: The Insider's Guide to Making Money in the Music Business,* 5th ed. (New York: Schirmer Trade Books, 2006).

[21] The top five music publishers are ranked by *Billboard* from accumulated points for all their charted songs. They are, in order, EMI Music Publishing, Universal Music Publishing Group, Warner/Chappell Music, BMG/Zomba Music Publishing, and Sony/ATV Music. See *Billboard*, March 25, 2006: 28-32.

[22] Global music publishing revenues will grow at an annual rate of seven percent, to about $5 billion, by 2008. These figures far exceed the three and five percent growth in 2003 and 2004, already a far better performance than recorded music sales. *Music & Copyright,* Nov. 9, 2005: 1, 12.

[23] Keynote Address, Scott Sperling, Managing Director of Thomas H. Lee Partners, at *Billboard's 3rd Annual Music & Money Symposium*, New York, March 4, 2004.

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